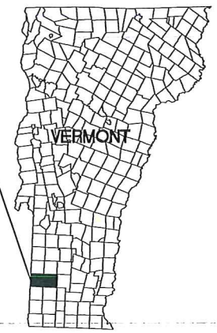
TOWN OF ARLINGTON, VERMONT
CONTRACT DRAWINGS FOR
WATER SYSTEM IMPROVEMENTS
CONTRACT No. 1

DWSRF LOAN #RF3-333
FEBRUARY, 2016

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

N
LOCATION MAP
SCALE: 1"=1000'



LEGEND

PROJECT LOCATION. . . . . .

TOWN SELECTBOARD

KEITH SQUIRES, CHAIR

CYNTHIA BROWNING

DANIEL HARVEY

REGINALD JENNINGS

TIMOTHY WILLIAMS

TOWN CLERK

ROBIN WILCOX

INDEX OF DRAWINGS

ISSUED FOR 60% REVIEW
NOT FOR CONSTRUCTION

No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

TITLE SHEET AND INDEX OF DRAWINGS

DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING T
CHECKED JJD	
DATE FEB. 2016	

LEGEND

EXISTING

PLAN

PROPERTY LINE ..... PL
RIGHT-OF-WAY ..... ROW
CONTOUR 360
WATER LINE ..... W
TELEPHONE CONDUIT (UNDERGROUND) ..... UGT
ELECTRICAL CONDUIT (UNDERGROUND) ..... UGE
OVERHEAD POWER ..... OHP
SEWER FORCEMAIN ..... FM
DRAIN ..... D
CULVERT
TREE/BRUSH LINE
GRAVEL ROAD OR DRIVE
BITUMINOUS PAVEMENT
SIDEWALK-CONCRETE
SIDEWALK-BITUMINOUS
SIDEWALK-MARBLE
CURBING

DITCH LINE

TELEPHONE POLE.
POWER POLE.
COMBINATION POLE.

GUY WIRE
SEPTIC SYSTEM
CATCH BASIN.
METER PIT.
HYDRANT.
CURB STOP.
VALVE.
SIGN.
DECIDUOUS TREE.
CONIFEROUS TREE.
STUMP.
SURVEY POINT SET.
SOIL BORING/PROBE. SB-4, P-5

PROFILE

GROUND SURFACE
UTILITY.

SOIL BORING/PROBE. SB-1 REF, P-1 NLTD

NLTD = NO LEDGE TO DEPTH
REF = REFUSAL

PROPOSED

PLAN

CONTOUR 360
WATER LINE ..... W
STUB
SILT FENCE
PERMANENT EASEMENT LIMIT.
TEMPORARY EASEMENT LIMIT.
GATE VALVE
FIRE HYDRANT
FLUSHING HYDRANT
CURB STOP
REDUCER
TRANSITION COUPLING
TEST PIT (BY CONTRACTOR)

PROFILE

PIPE LINE
INSULATION OVER PIPE
FITTING
VALVE.
HYDRANT.
CORPORATION STOP
REDUCER
TRANSITION COUPLING.

REQUIRED TRAFFIC CONTROL

UNIFORMED TRAFFIC CONTROL SCHEDULE

LOCATION	DRAWING No.	STATION	DESCRIPTION	HOURS
US ROUTE 7A	3	0+00 TO 9+28	OPEN CUT INSTALLATION AND DIRECTIONAL DRILL	--
US ROUTE 7A	4	0+00 TO 10+00	OPEN CUT INSTALLATION AND DIRECTIONAL DRILL	--
US ROUTE 7A	5	10+00 TO 20+08	OPEN CUT INSTALLATION AND DIRECTIONAL DRILL	--
US ROUTE 7A	6	0+00 TO 8+36	OPEN CUT INSTALLATION AND DIRECTIONAL DRILL	--
US ROUTE 7A	9	0+00 TO 8+69	OPEN CUT INSTALLATION AND DIRECTIONAL DRILL	--

NOTES:

1. UNIFORMED TRAFFIC CONTROL SHALL BE PROVIDED AT ONE END OF OPERATION DURING CONSTRUCTION AT THE LOCATIONS SPECIFIED IN THE ABOVE SCHEDULE. A FLAG PERSON SHALL BE PROVIDED AT THE OTHER END. LANE CLOSURES SHALL BE IN ACCORDANCE WITH VTRANS STANDARD E-110 MAJOR MAINTENANCE OPERATION LANE CLOSURE. ALL AREAS SHALL BE RESTORED TO NORMAL TWO-WAY TRAFFIC AS SOON AS POSSIBLE, AND AT THE END OF EACH DAY'S CONSTRUCTION ACTIVITY.
2. FOR ALL AREAS AT LEAST ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. PROVIDE FLAG PERSONS AT BOTH ENDS OF OPERATION AND ESTABLISHED SIGNAGE.
3. REFER TO SECTION 01570 FOR TRAFFIC REGULATION REQUIREMENTS.
4. THE COST OF UNIFORMED TRAFFIC CONTROL SHALL BE PAID FOR UNDER BID ITEM E-4, AS APPROPRIATE.
5. THE COST FOR CERTIFIED FLAG PERSONS, ALL OTHER MATERIALS, AND SIGNAGE RELATED TO TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE WATERLINE.

GENERAL CONSTRUCTION NOTES

1. SAFETY

A. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL SAFETY LAWS AND BUILDING CODES TO PREVENT ACCIDENTS OR INJURY. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES ALL NECESSARY SAFEGUARDS AND BARRICADES FOR THE PROTECTION OF EMPLOYEES ON THE WORK AND SAFETY OF OTHERS EMPLOYED NEAR THE WORK AND THE PUBLIC. FURTHER, THE CONTRACTOR SHALL POST DANGER SIGNS AND OTHER WARNING DEVICES TO PROTECT INDIVIDUALS FROM BEING INJURED IN THE VICINITY OF THE WORK.

B. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE V.O.S.H.A. SAFETY REQUIREMENTS. THE CONTRACTOR SHALL INSURE ALL WORK PROCEEDS IN ACCORDANCE WITH V.O.S.H.A. REQUIREMENTS FOR SAFETY TRENCHING, EXCAVATION, AND CONFINED SPACE ENTRY PROCEDURES.

C. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT AND FACILITIES AS ARE NECESSARY AND REQUIRED TO PROVIDE EMERGENCY FIRST AID TO ANY PERSON WHO MAY BE INJURED IN THE PROSECUTION OF THE WORK UNDER THIS CONTRACT.

D. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY TRAFFIC CONTROL SIGNS AND DEVICES BEFORE COMMENCING WORK ON THE PROJECT IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

2. EASEMENTS

A. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN TEMPORARY CONSTRUCTION EASEMENT LIMITS AND/OR RIGHTS-OF-WAY AS SHOWN ON THE PLANS.

B. WHERE NO TEMPORARY CONSTRUCTION EASEMENT IS SHOWN ON CONTRACT DRAWINGS, THE CONTRACTOR SHALL STAY WITHIN THE PERMANENT EASEMENT LIMITS, AND/OR RIGHTS-OF-WAY DURING CONSTRUCTION, AS SHOWN ON THE PLANS.

3. PROTECTION OF WORK

A. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL BUILDINGS, STRUCTURES AND UTILITIES (BOTH PUBLIC AND PRIVATE), INCLUDING POWER POLES, SIGNS, UTILITY SERVICES, WATER MAINS, HYDRANTS, SEWERS, FORCE MAINS, STORM DRAINS, BURIED ELECTRICAL OR CONTROL WIRES, GAS LINES, AND TELEPHONE CABLES WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS.

B. THE CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ANY UTILITIES, STRUCTURES, PIPE LINES, AND CONDUITS WHICH MAY BE ENCOUNTERED DURING COMPLETION OF THE WORK. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY HIM TO THE SATISFACTION OF THE ENGINEER AT CONTRACTOR'S EXPENSE.

4. MAINTENANCE OF FLOWS

A. THE CONTRACTOR SHALL, AT HIS OWN COST, MAKE PROVISIONS FOR MAINTAINING FLOW THROUGH EXISTING FORCE MAINS, SEWER LINES, WATERLINES, STORM DRAINS, AND WATER COURSES WHICH MUST BE INTERRUPTED DURING THE PROGRESS OF THE WORK. UPON COMPLETION OF THE WORK, ALL TEMPORARY FLOW DIVERSIONS, STRUCTURES, AND PIPING SHALL BE REMOVED FROM THE SITE.

5. BURIED UTILITIES

A. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE ONLY. THOSE SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE ENGINEER, OWNER, REPRESENTATIVES OF THE TELEPHONE COMPANY, ELECTRICITY COMPANY, GAS COMPANY, CABLE COMPANY, AND ANY OTHER UTILITY COMPANIES INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT TO COORDINATE THE MARKING, AND TIMING OF DISRUPTIONS OF THE VARIOUS UTILITIES, IF ANY.

B. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. THESE SHALL BE EXCAVATED TO LOCATE BURIED UTILITIES AND TO DETERMINE SIZE, LOCATIONS AND/OR MATERIALS OF EXISTING UTILITIES. SOME HAND EXCAVATING MAY BE NECESSARY TO PROTECT UTILITIES. TEST PITS SHALL BE EXCAVATED AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION SO THAT DESIGN REVISIONS MAY BE MADE IF REQUIRED. TEST PITS INDICATED ON DRAWINGS OR BY WRITTEN DIRECTION FROM THE ENGINEER WILL BE PAID FOR UNDER BID ITEM FOR MISC., EXTRA, AND BELOW GRADE EXCAVATION.

C. EXISTING UTILITIES SHALL BE PROTECTED OR REMOVAL AND REPLACEMENT SHALL BE COORDINATED WITH THE APPROPRIATE COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR REPAIR OF ANY SUCH DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. ALL UTILITIES WHICH MAY BE BROKEN OR DAMAGED SHALL BE REPAIRED TO AS GOOD OR BETTER CONDITION AND RECONNECTED FOR SERVICE. SUBMIT ALL REPAIR METHODS TO THE ENGINEER FOR APPROVAL. NO REPAIR SHALL BE BACKFILLED PRIOR TO INSPECTION BY THE ENGINEER IN THE FIELD. CONTRACTOR SHALL TAKE MEASUREMENTS TO DOCUMENT WHERE ALL SERVICE REPAIRS ARE MADE. RECORDS SHALL BE MADE AVAILABLE TO THE ENGINEER AND OWNER UPON REQUEST AND PRIOR TO THE END OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A SUPPLY OF REPAIR MATERIALS AND PIPE ON THE JOB SITE AT ALL TIMES IN ORDER TO MINIMIZE THE INCONVENIENCE CAUSED BY SUCH DAMAGE.

6. CONSTRUCTION

A. THE CONTRACTOR SHALL USE ONLY DESIGNATED BENCH MARKS FOR REFERENCE ELEVATIONS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HOLDING UTILITY POLES AS NECESSARY. THE COST OF UTILITY POLE HOLDING SHALL BE INCIDENTAL TO THE PIPE. ALL WORK SHALL BE IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS.

C. SUBSURFACE EXPLORATION LOGS ARE BOUND IN THE SPECIFICATIONS.

D. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG IN THE END OF ALL PIPE WORK AT THE COMPLETION OF EACH WORK DAY TO SEAL IT FROM WATER AND SOIL.

E. EXISTING WATER SERVICES SHALL BE MAINTAINED DURING CONSTRUCTION. THE NEW SYSTEM SHALL BE TESTED, INSPECTED, CHLORINATED AND APPROVED PRIOR TO TRANSFERRING SERVICE TO NEW SYSTEM. NO WATER SHALL BE ALLOWED IN THE NEW SYSTEM UNTIL APPROVED BY THE OWNER AND ENGINEER, AND THE CONDITIONS IN THE AGENCY OF NATURAL RESOURCES, DRINKING WATER AND GROUNDWATER PROTECTION DIVISION CONSTRUCTION PERMIT ARE COMPLETE.

F. ADDITIONAL BENDS, AS NECESSARY, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. PROVIDE A MAXIMUM OF 45° BENDS FOR FORCEMAINS. NO 90° BENDS WILL BE ALLOWED.

G. ALL FITTINGS AND JOINTS ON WATERMAINS SHALL BE MECHANICAL JOINT, PER SPECIFICATIONS. ALL MECHANICAL JOINT FITTINGS SHALL BE PROVIDED WITH RETAINER GLANDS.

6. CONSTRUCTION (CONT.)

H. CONTRACTOR SHALL DOCUMENT THE LOCATIONS OF EXISTING SEWER SERVICES AS THEY ENCOUNTER THEM DURING CONSTRUCTION. WATER SERVICES SHALL BE INSTALLED WITH AT LEAST 10 FEET OF HORIZONTAL AND 18" OF VERTICAL SEPARATION FROM SEWER SERVICES WHENEVER POSSIBLE.

I. ALL MAIN LINE GATE VALVES SHALL OPEN-IN DIRECTION AS REQUIRED BY THE OWNER.

J. THRUST BLOCKS SHALL BE PROVIDED FOR ALL WATERMAIN BENDS AND FITTINGS AND ARE INCIDENTAL TO THE UNIT PRICE OF THE PIPE.

K. ANY EXISTING WATER SERVICES THAT MAY INTERFERE WITH THE NEW WATER MAIN SHALL NOT BE RELOCATED AT LESS THAN THEIR EXISTING COVER. CONTRACTOR SHALL LOWER THE NEW WATER MAIN AND ALLOW ADEQUATE CLEARANCE.

L. EROSION CONTROL, AS NECESSARY, SHALL BE PROVIDED BY THE CONTRACTOR, IN ACCORDANCE WITH CONTRACT DOCUMENTS. EROSION CONTROLS SHALL BE IN PLACE DOWNSTREAM OF THE AREA OF CONSTRUCTION PRIOR THE START OF ANY EARTH DISTURBANCE. ALL DISTURBED AREAS ARE TO BE IMMEDIATELY STABILIZED.

M. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREA WITHIN THREE (3) WORKING DAYS OF INITIAL DISTURBANCE. ALL RESTORATION SHALL BE AS GOOD OR BETTER THAN ORIGINAL CONDITION AND SHALL MEET THE REQUIREMENTS SET FORTH IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN BASIS OF DESIGN.

N. REMOVAL OF EXISTING VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PIPE.

O. ALL NEW CORPORATIONS, HOUSE SERVICES, AND CURB STOPS SHALL BE 3/4" CTS UNLESS OTHERWISE NOTED ON THE DRAWINGS.

P. TEMPORARY WATER IS REQUIRED ON ROUTE 313. THE CONTRACTOR IS REQUIRED TO SUBMIT A DETAILED TEMPORARY WATER PLAN (AS A SHOP DRAWING) AT THE PRE-CONSTRUCTION MEETING. REFER TO THE SPECIAL CONDITIONS IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

Q. THE CONTRACTOR WILL BE REQUIRED TO BECOME CO-PERMITTEE ON THE VTRANS 1111 PERMIT. THE CONTRACTOR IS REQUIRED TO PROVIDE THE NECESSARY LEVEL OF TRAFFIC CONTROL AND SIGN PACKAGE FOR WORK WITIN THE VTRANS RIGHT-OF-WAY (ROW). THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION WITHIN THE VTRANS ROW AS A FORMAL SHOP DRAWING SUBMITTAL FOR REVIEW BY THE ENGINEER AND VTRANS. PROPOSED TRAFFIC CONTROL PACKAGE MUST BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

7. SITEWORK

A. THE CONTRACTOR IS RESPONSIBLE FOR RECORDING PRECONSTRUCTION CONDITIONS BY USE OF PHOTOGRAPHS, VIDEO TAPES, AND OTHER METHODS. EXISTING FENCES, GUARDRAILS, SIGNS, CATCH BASINS, CULVERTS, HEADWALLS, ETC. REMOVED BY THE CONTRACTOR SHALL BE REPLACED TO AT LEAST THEIR ORIGINAL CONDITION. THE COST OF THIS PRECONSTRUCTION DOCUMENTATION AND RECONSTRUCTION SHALL BE PAID FOR UNDER THE UNIT PRICE BID ITEM FOR PIPE WORK.

B. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFF-SITE UNLESS OTHERWISE APPROVED BY THE OWNER. A COPY OF A WRITTEN AGREEMENT BETWEEN THE CONTRACTOR AND THE SITE OWNER SHALL BE SUBMITTED TO THE ENGINEER BEFORE ANY MATERIAL IS DEPOSITED ON ANY SITE. DISPOSAL OF EXCESS MATERIAL OFF-SITE SHALL BE PERFORMED IN ACCORDANCE WITH SOLID WASTE MANAGEMENT DIVISION REGULATIONS AND SHALL INCLUDE OBTAINING ANY REQUIRED PERMITS.

C. CONTRACTOR IS RESPONSIBLE FOR RESTORING GRAVEL SHOULDERS, PAVED SHOULDERS, ROADWAY SURFACES, DRIVEWAYS, AND CULVERTS TO THE SAME OR BETTER CONDITION AT PROJECT COMPLETION. THE COST OF RESTORATION SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID ITEM.

D. SOME MAILBOXES AND SIGNS ARE NOT SHOWN ALONG PROJECT ROUTE FOR REASONS OF CLARITY. THE CONTRACTOR SHALL RESET ALL MAILBOXES AND SIGNS AS SOON AS POSSIBLE, AS CONSTRUCTION PERMITS AND/OR AS DIRECTED BY THE ENGINEER.

E. TREES LOCATED WITHIN THE TEMPORARY CONSTRUCTION EASEMENT LIMITS SHALL NOT BE TRIMMED, DAMAGED, OR DESTROYED WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER ON A LOCATION BY LOCATION BASIS. DOCUMENTATION MUST BE FURNISHED TO THE ENGINEER PRIOR TO PERFORMING THE WORK.

8. RECORD DOCUMENTS

A. ALL BURIED UTILITIES ENCOUNTERED SHALL BE DOCUMENTED WITH DEPTH AND THREE (3) TIES AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS.

B. ALL NEW SEWER LINES, FORCEMAINS, AND APPURTENACES SHALL BE DOCUMENTED WITH THREE (3) DISTANCE TIES AND DEPTH OF BURY, AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT AND SHALL BE PROVIDED TO THE ENGINEER IMMEDIATELY UPON REQUEST.

9. DIGSAFE

A. CONTRACTOR SHALL NOTIFY DIG SAFE TWO (2) WEEKS PRIOR TO ANY ANTICIPATED EXCAVATIONS. CONTRACTOR SHALL NOT EXCAVATE IN ANY AREAS UNTIL DIG SAFE HAS BEEN TO THE SITE AND HAS MARKED UTILITIES. (DIG SAFE: 1-888-344-7233)

10. SURVEY

A. TOPOGRAPHIC SURVEY DATUM IS BASED ON THE NATIONAL GEODETIC SURVEY USING NAD 83 (1996) HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM.

B. PROPERTY AND RIGHT OF WAY (ROW) LINES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI). THEY SHOW AN APPROXIMATION OF PROPERTY AND ROW LINES AS THEY RELATE TO THE PROJECT DETAILS BASED ON THE SOURCE REFERENCE INFORMATION. A+E DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION. THESE DRAWINGS SHALL NOT BE CONSTRUED AS A PROPERTY PLAT AND DO NOT DEFINE LEGAL RIGHTS OR MEET LEGAL REQUIREMENTS FOR A LAND SURVEY AS DESCRIBED IN 26 V.S.A. 2502(4).

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

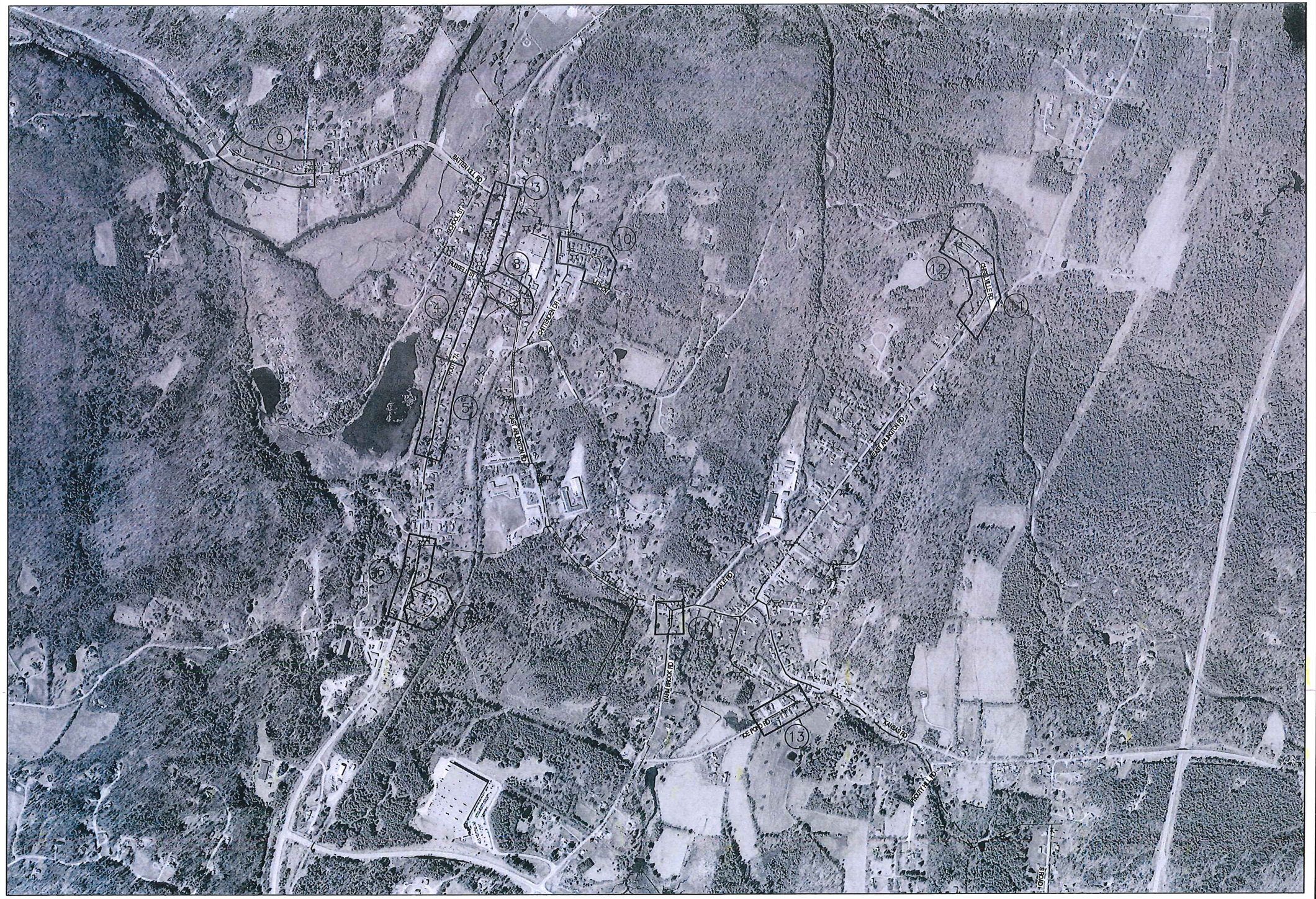
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

GENERAL NOTES AND LEGEND

DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 1
CHECKED JJD	
DATE FEB. 2016	



DRAWING LOCATION PLAN
SCALE: 1"=500'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

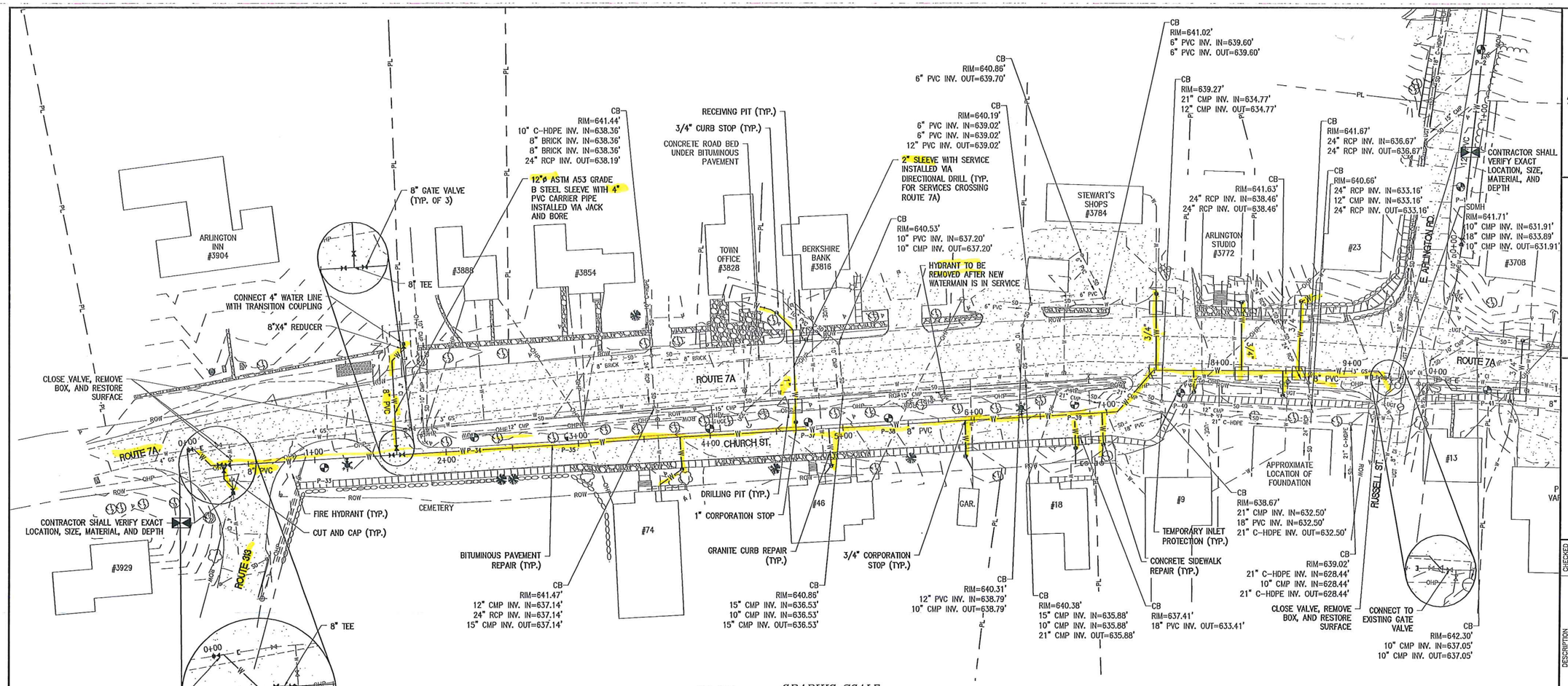
TOWN OF ARLINGTON, VERMONT

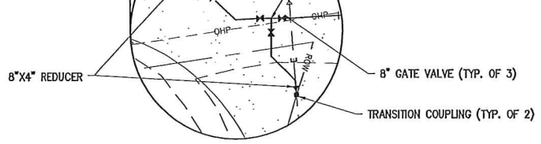
WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

DRAWING LOCATION PLAN

DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 2
CHECKED JJD	
DATE FEB. 2016	

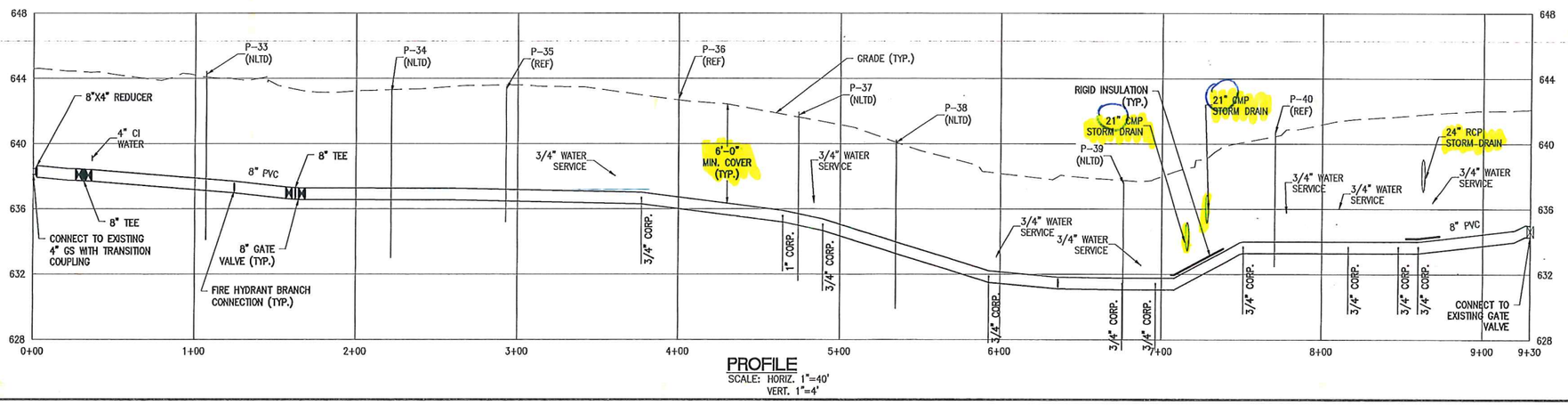
Y:\15067-ARLINGTON\15067-2.dwg, 12/1/2015 11:41:51 AM





PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

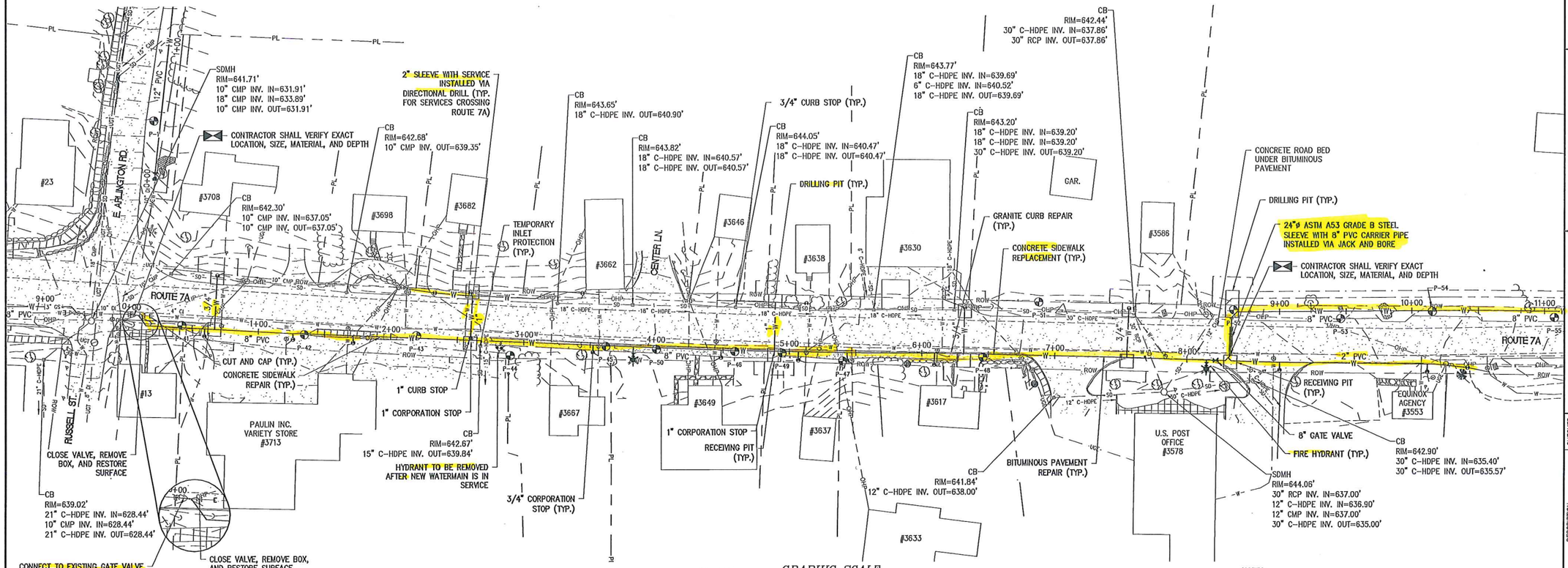
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ROUTE 7A
PLAN AND PROFILE
STA. 0+00 TO 9+28

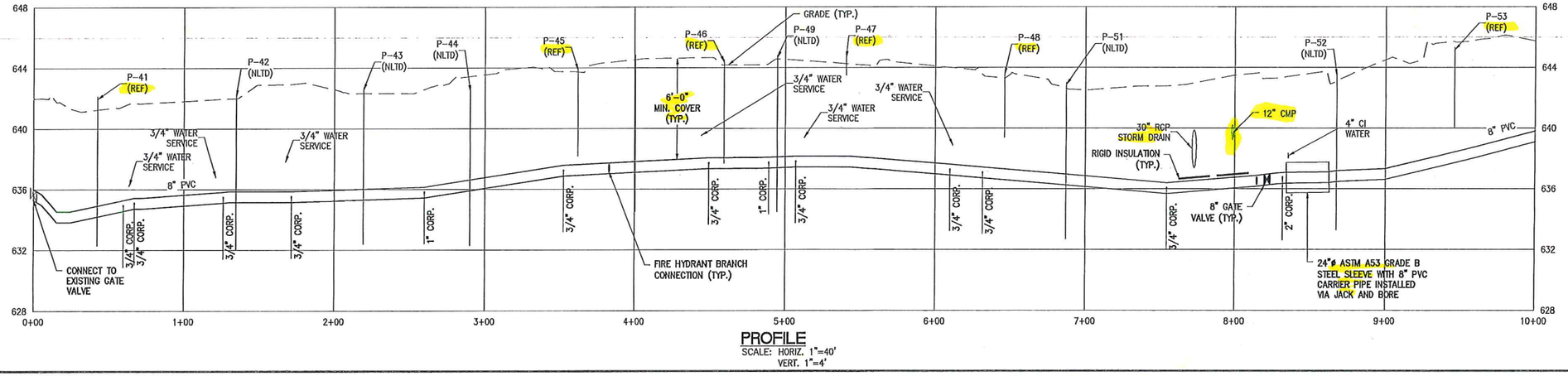
DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 3
CHECKED JJD	
DATE FEB. 2016	

Y:\15067-ARLINGTON\15067-3.dwg, 12/1/2015 2:42:18 PM



NOTES:

1. ALL BITUMINOUS SIDEWALK SHALL BE REPLACED WITH CONCRETE SIDEWALK.



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION

CHECKED

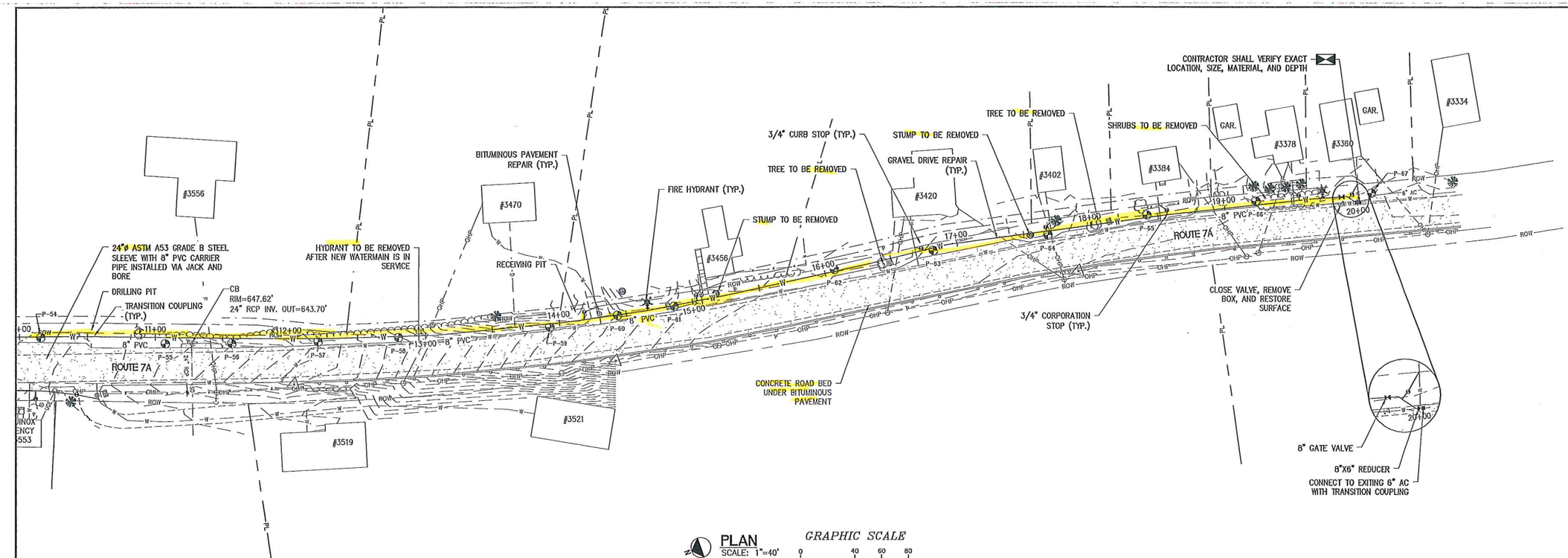
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ROUTE 7A
PLAN AND PROFILE
STA. 0+00 TO 10+00

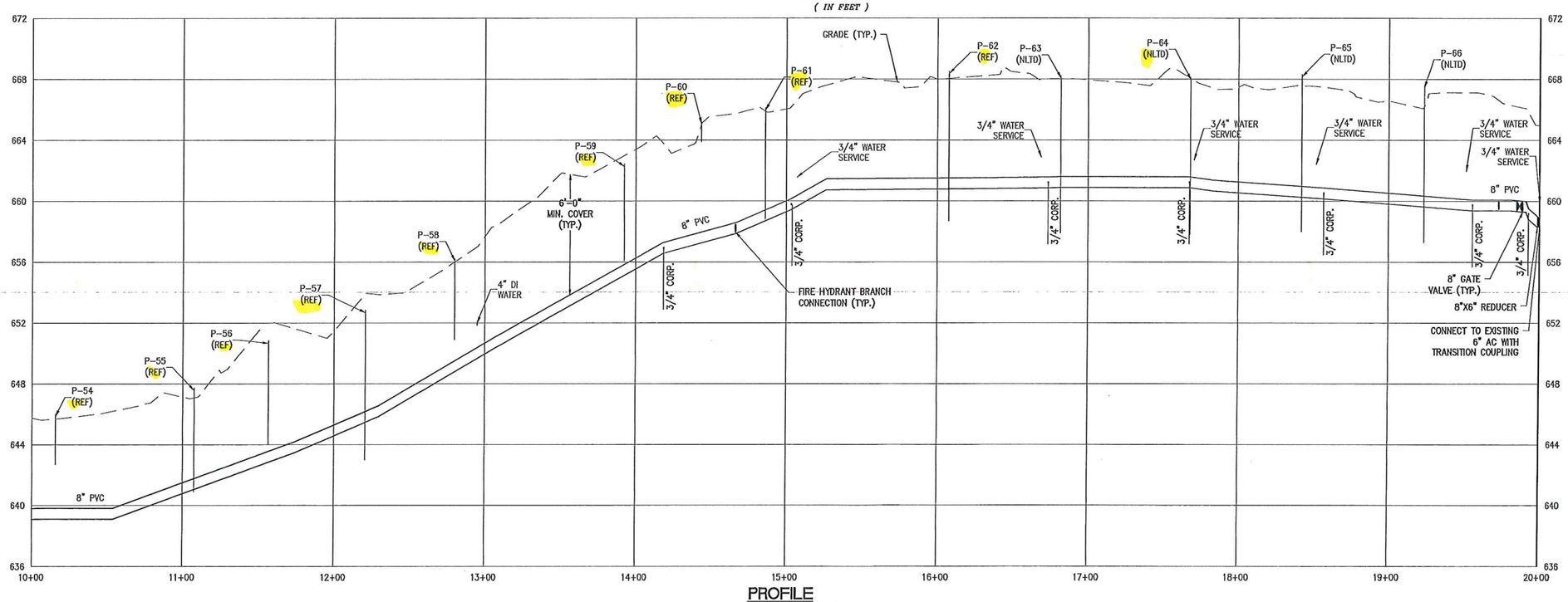
DESIGNED	PROJECT NO.
NAP	15067
DRAWN	DRAWING
JEN	4
CHECKED	
JJD	
DATE	
FEB. 2016	

Y:\15067-ARLINGTON\15067-4.dwg 12/2/2015 10:17:19 AM



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

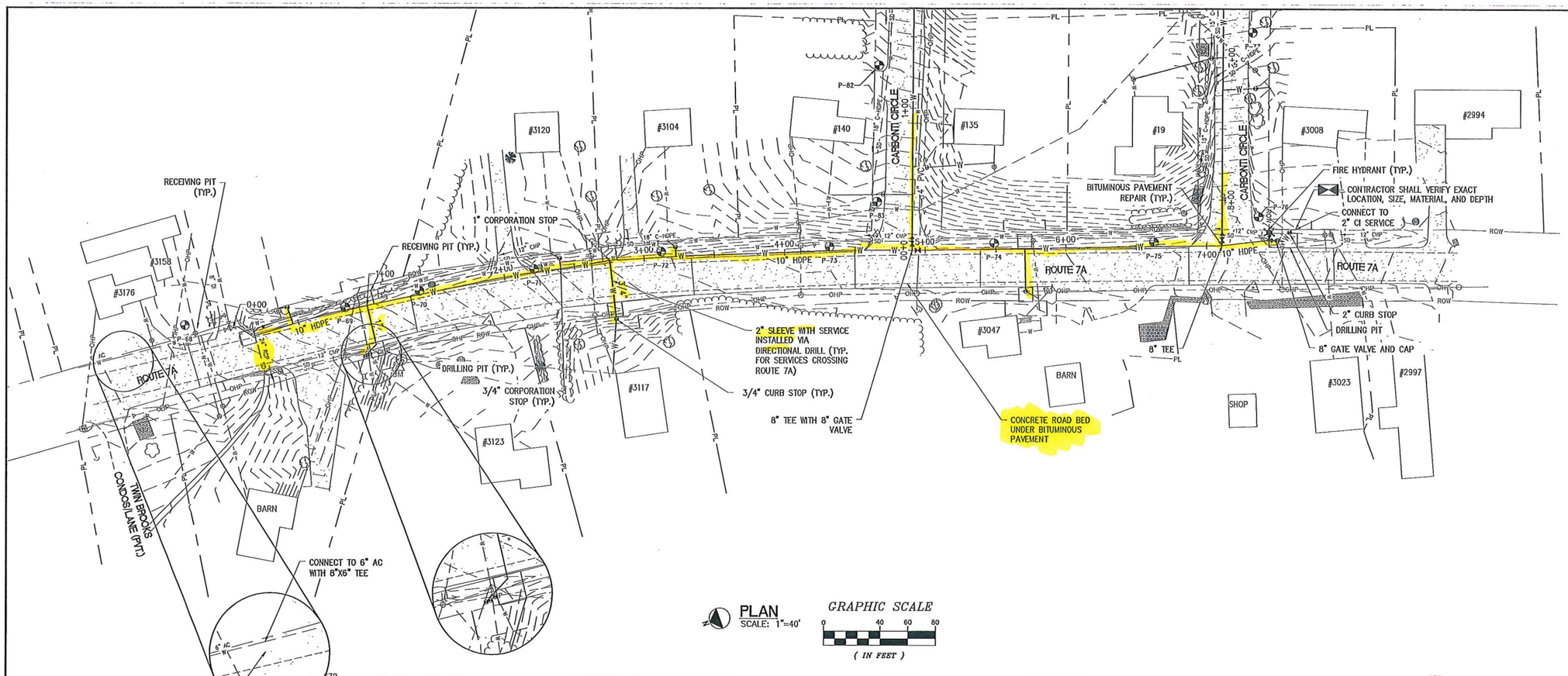
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ROUTE 7A
PLAN AND PROFILE
STA. 10+00 TO 20+01

DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 5
CHECKED JJD	
DATE FEB. 2016	

Y:\15067-ARLINGTON\15067-5.dwg, 12/2/2015 10:28:14 AM



Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

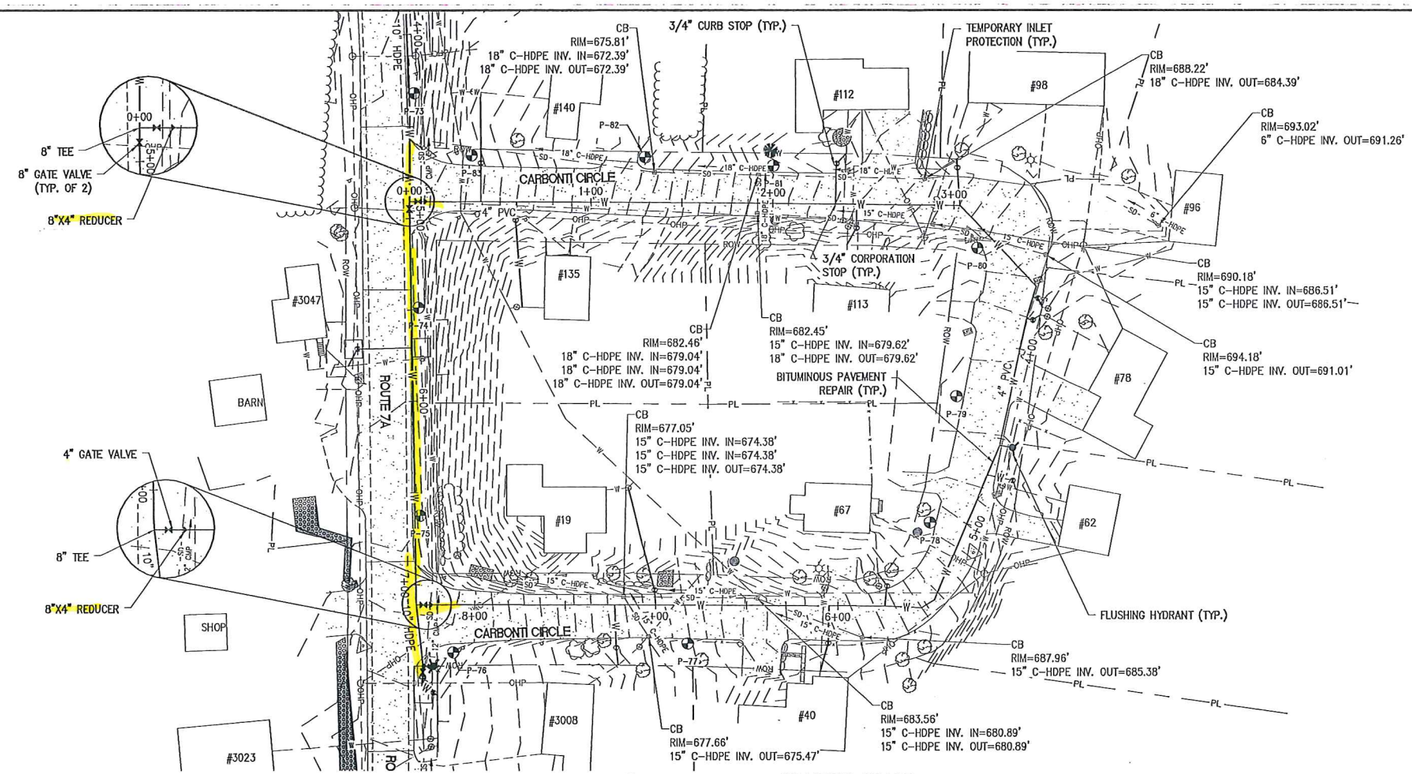
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

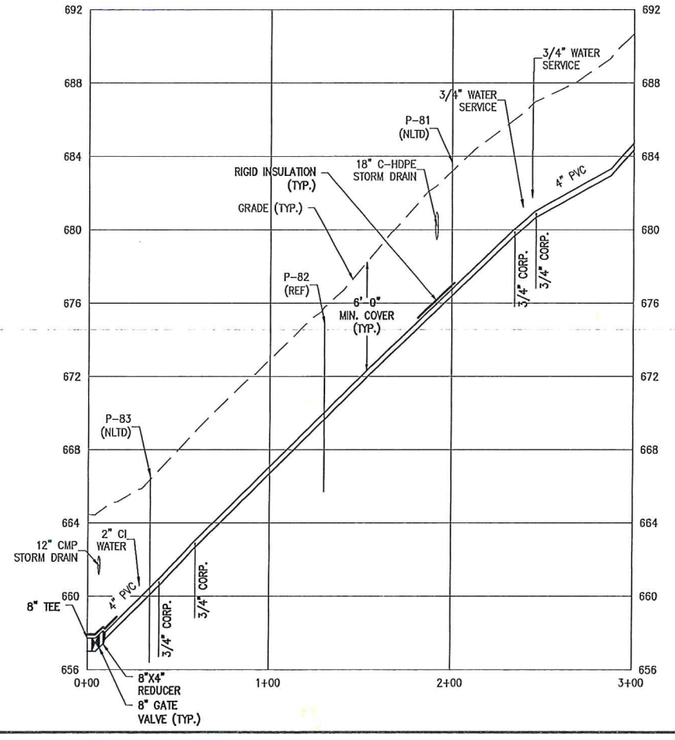
ROUTE 7A PLAN AND PROFILE STA. 0+00 TO 7+68

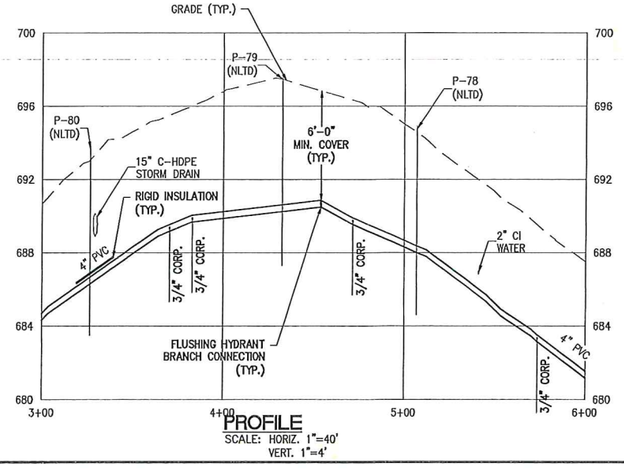
DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 6
CHECKED JJD	
DATE FEB. 2016	



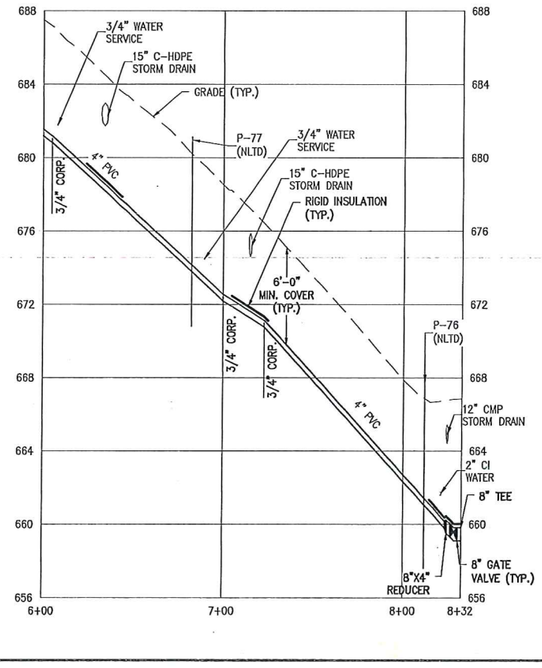
PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)





PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'



Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

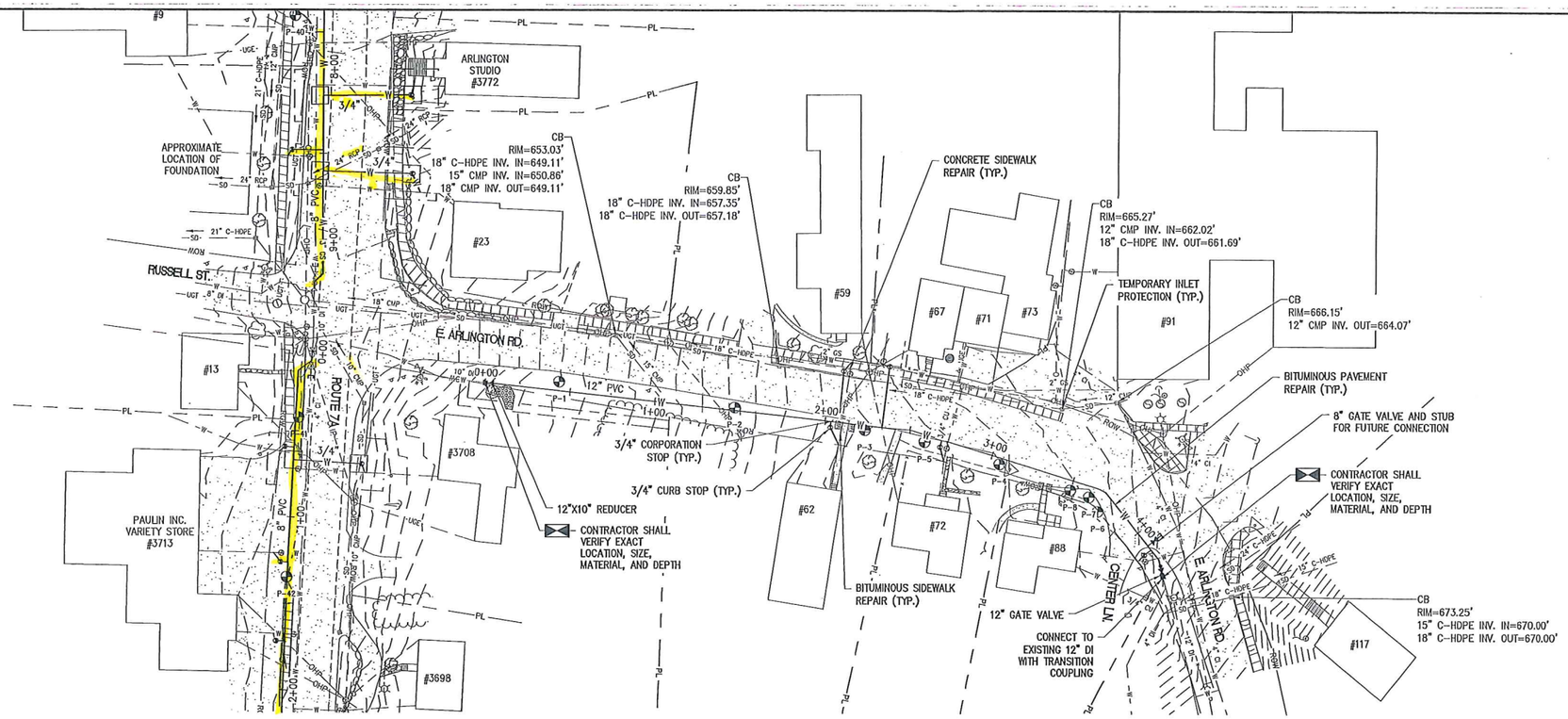
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

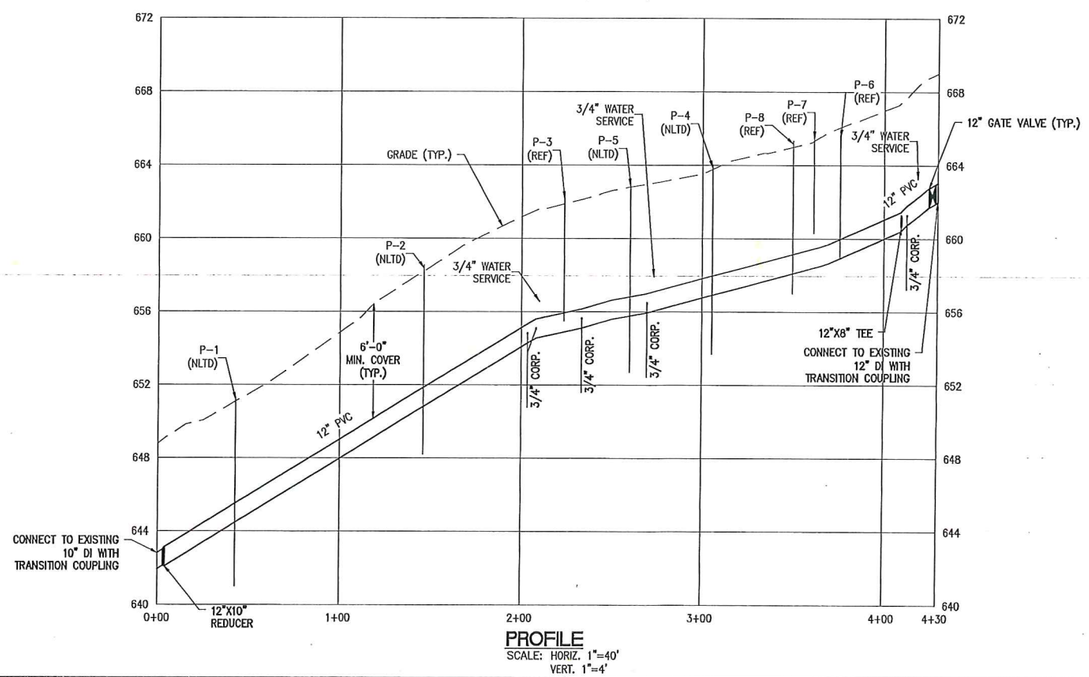
CARBONTI CIRCLE PLAN AND PROFILE STA. 0+00 TO 8+32

DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 7
CHECKED JJD	
DATE FEB. 2016	



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

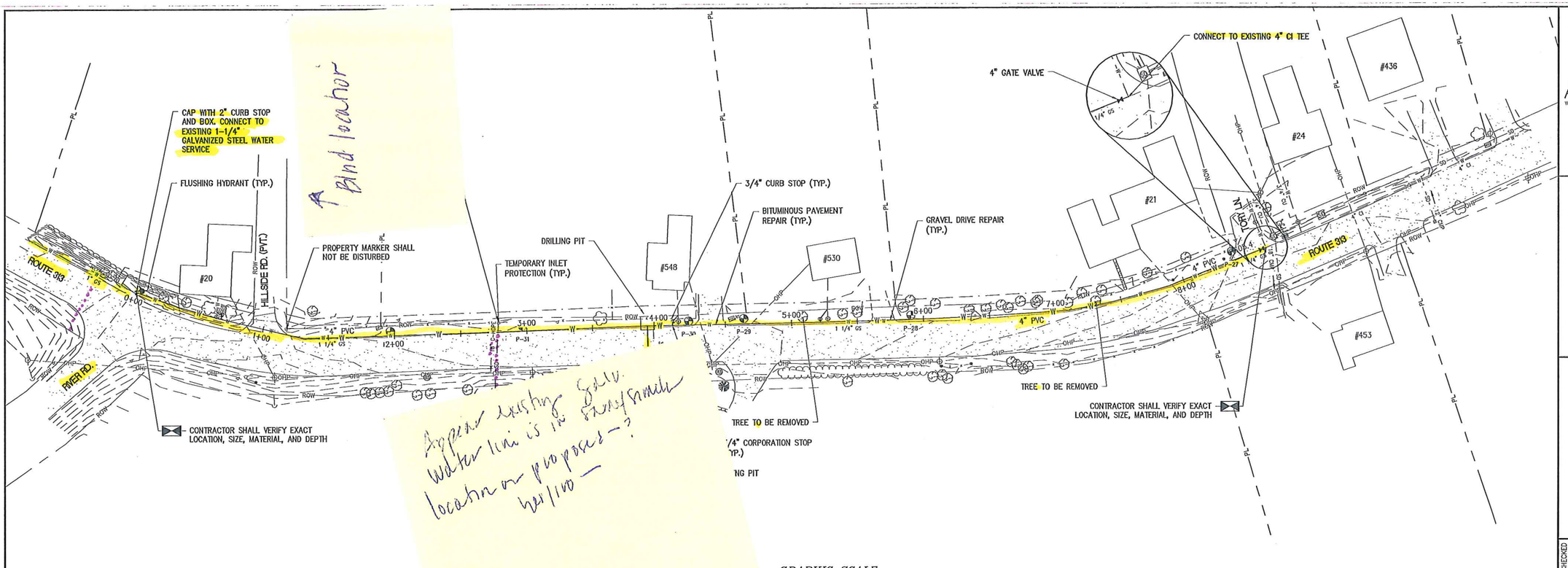
No.	DATE	DESCRIPTION

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

EAST ARLINGTON ROAD PLAN AND PROFILE STA. 0+00 TO 4+30

DESIGNED	PROJECT NO.
NAP	15067
DRAWN	DRAWING
JEN	8
CHECKED	
JJD	
DATE	
FEB. 2016	



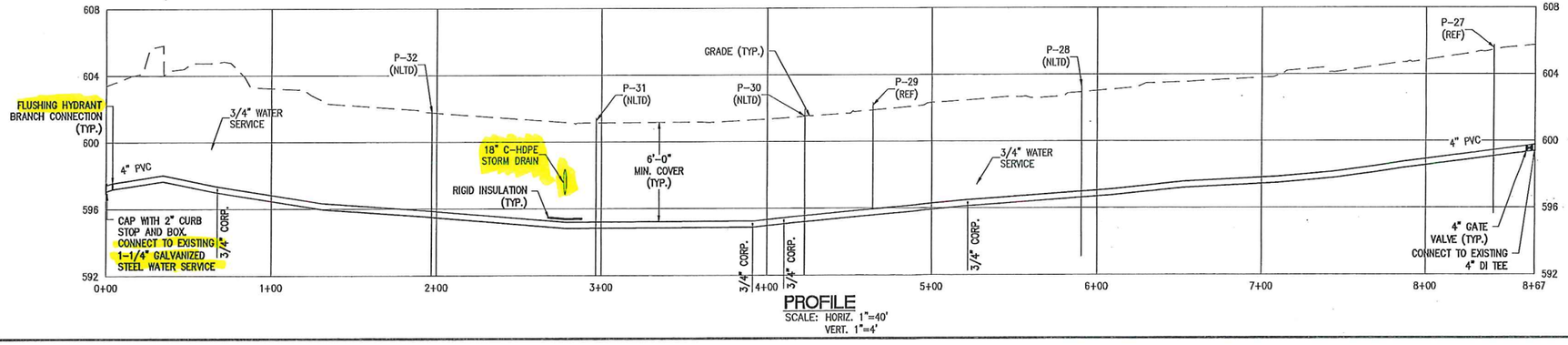
GRAPHIC SCALE

0 40 60 80

(IN FEET)

NOTES:

1. CONTRACTOR SHALL INSTALL NEW 4" PVC C900 WATERLINE IN SAME TRENCH AS EXISTING 1-1/4" GALVANIZED STEEL.



PROFILE

SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

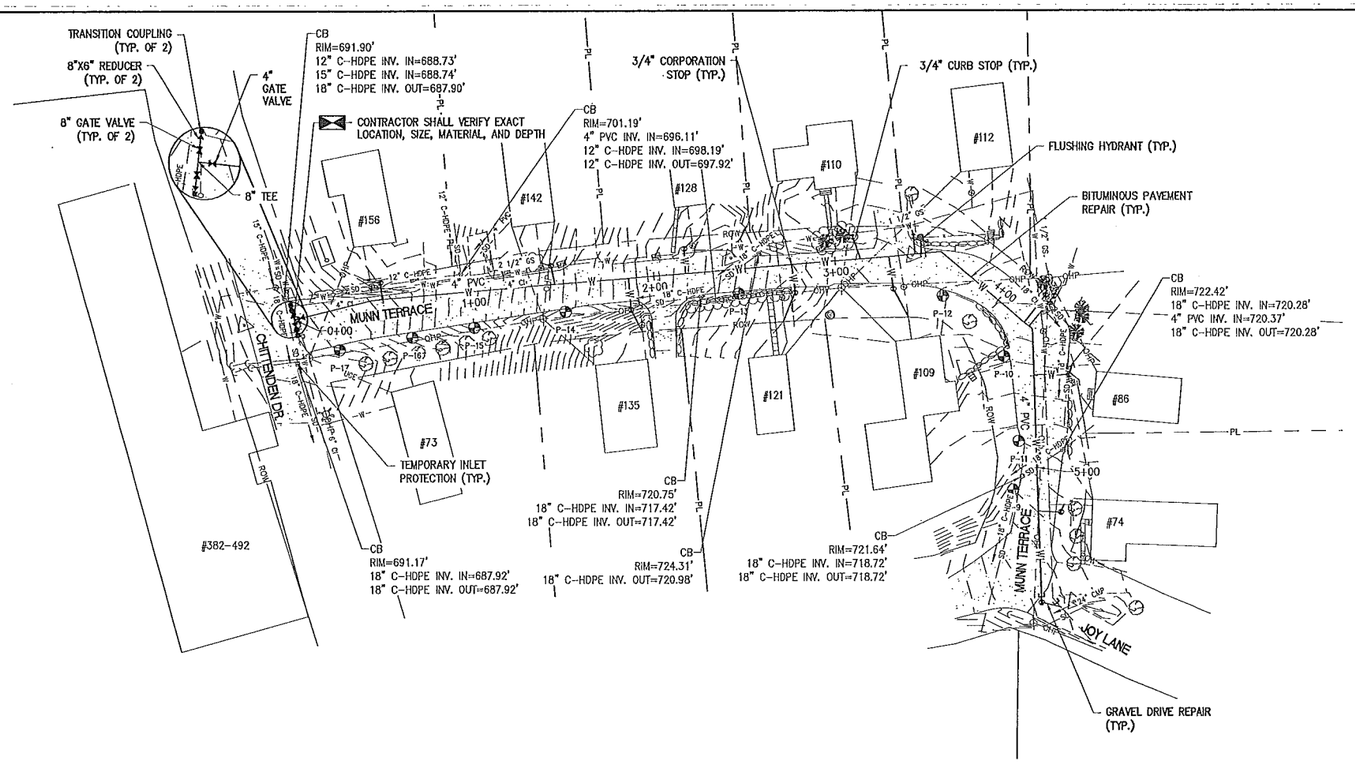
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ROUTE 313 PLAN AND PROFILE STA. 0+00 TO 8+67

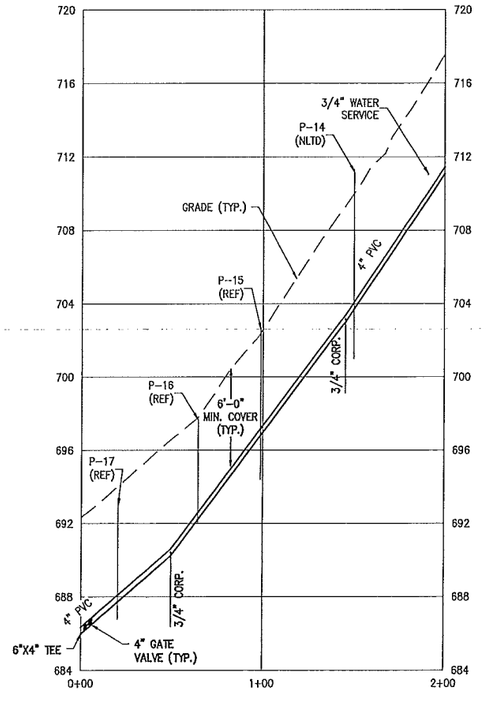
DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 9
CHECKED JJD	
DATE FEB. 2016	

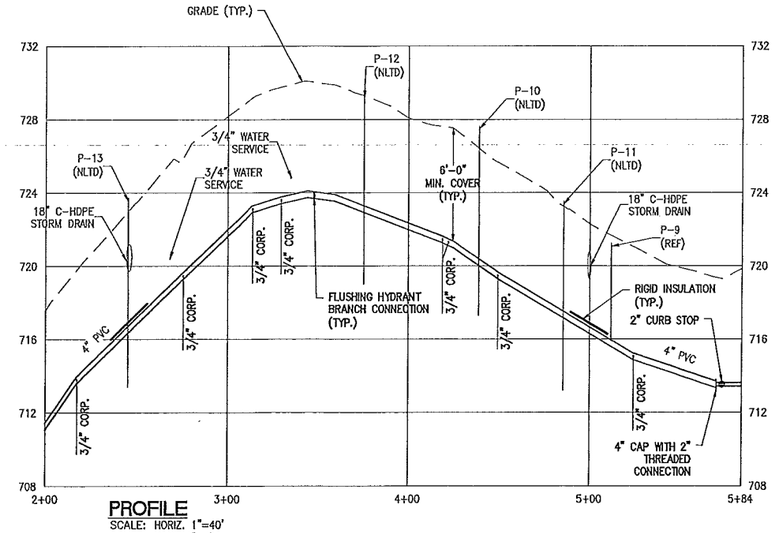
Y:\15067-ARLINGTON\15067-S.dwg, 12/1/2015 23:41 PM



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)





PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

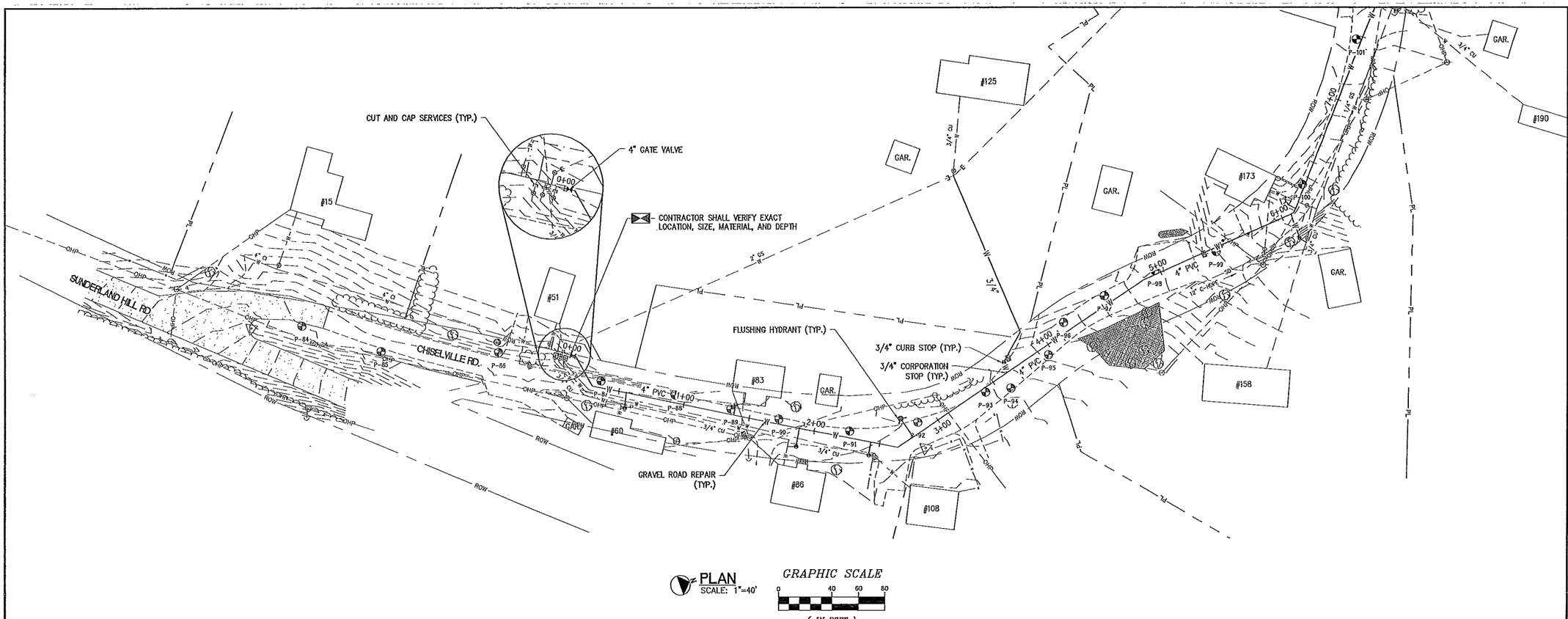
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

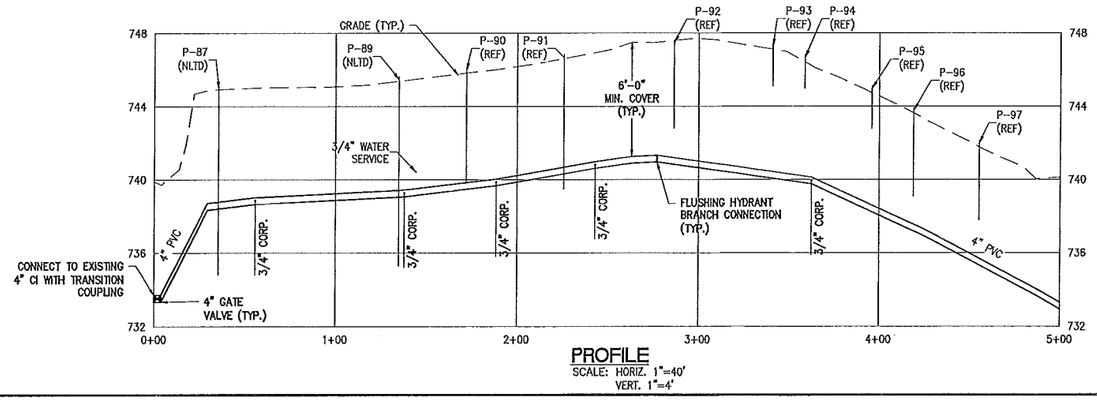
MUNN TERRACE PLAN AND PROFILE STA. 0+00 TO 5+74

DESIGNED	PROJECT NO.
NAP	15067
DRAWN	DRAWING
JEN	10
CHECKED	
JJD	
DATE	
FEB. 2016	



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

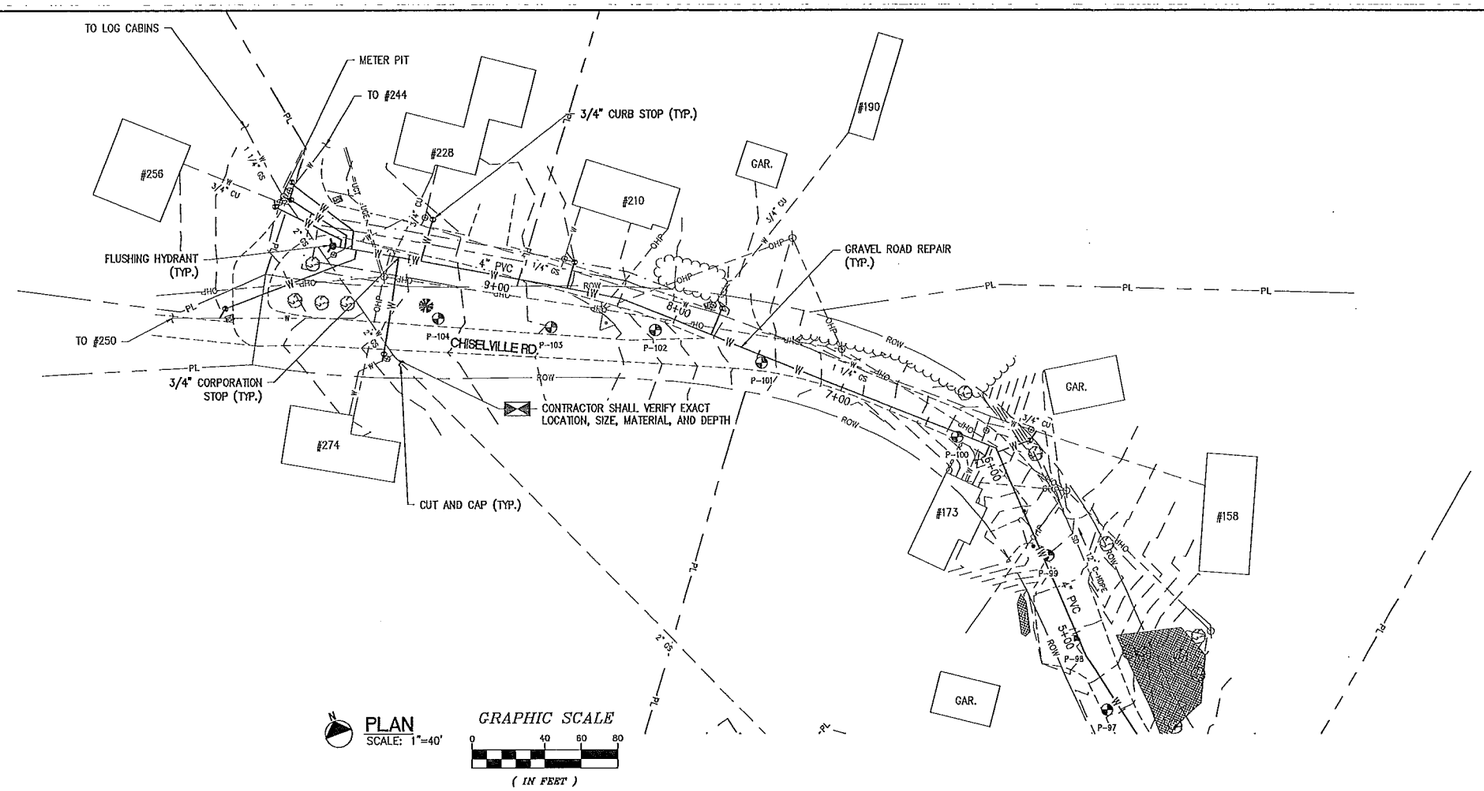
No.	DATE	DESCRIPTION	CHECKED

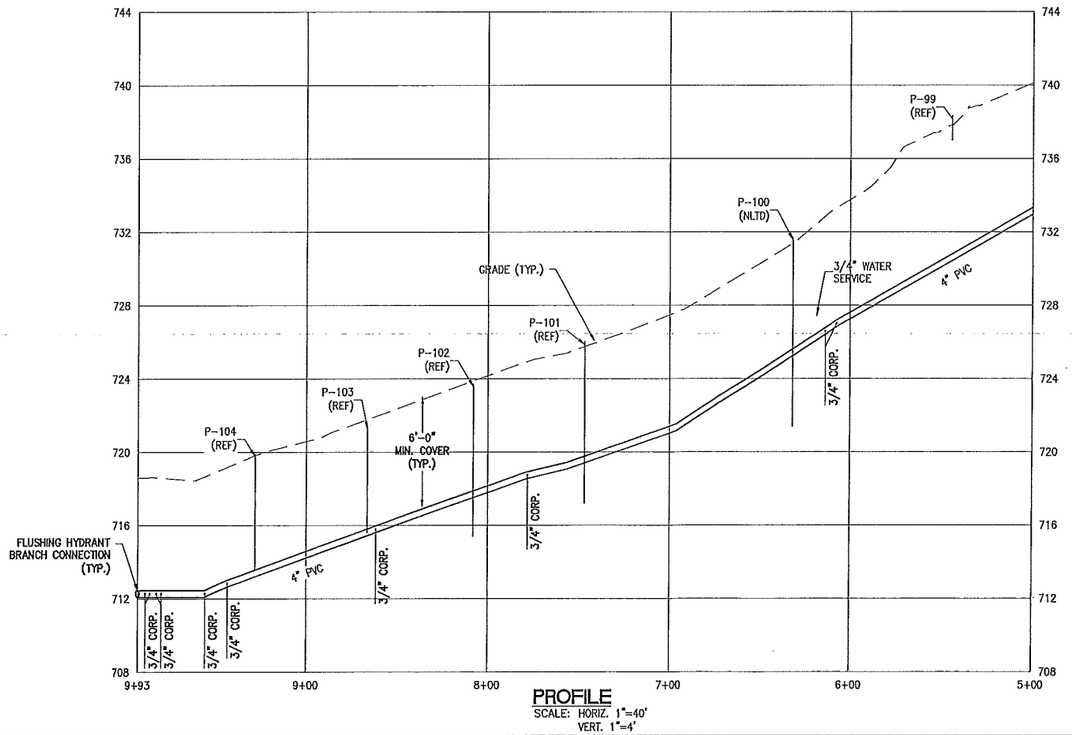
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

CHISELVILLE ROAD PLAN AND PROFILE STA. 0+00 TO 5+00

DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 11
CHECKED JJD	
DATE FEB. 2016	





Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

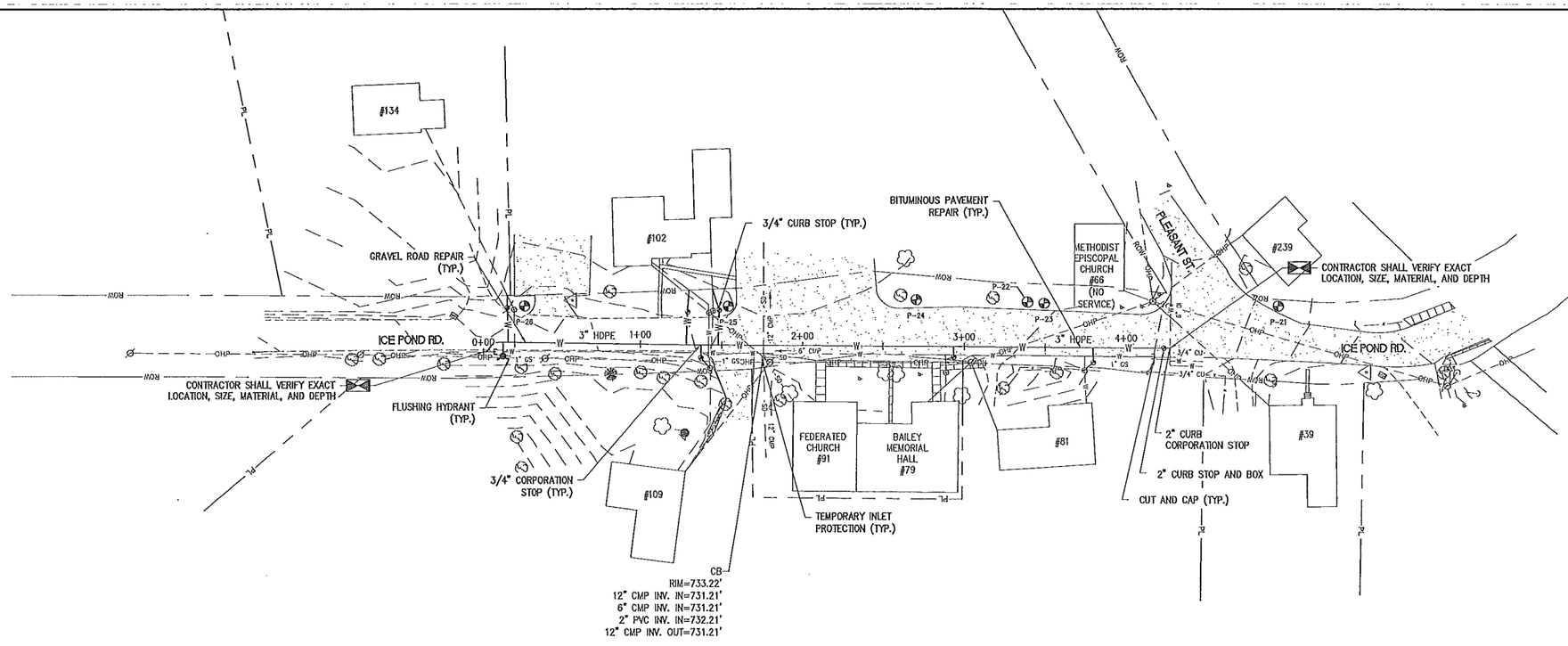
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

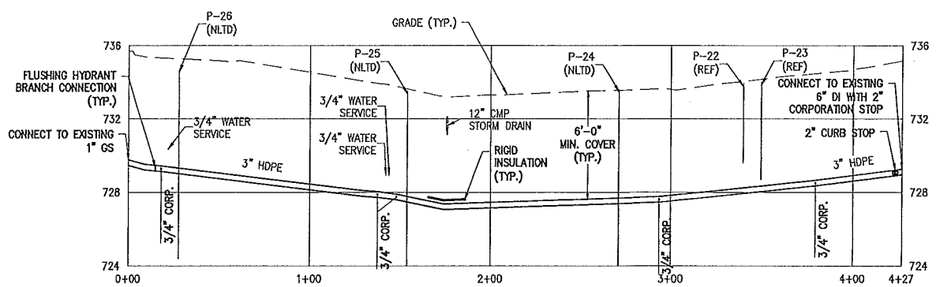
CHISELVILLE ROAD PLAN AND PROFILE STA. 5+00 TO 9+93

DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 12
CHECKED JJD	
DATE FEB. 2016	



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

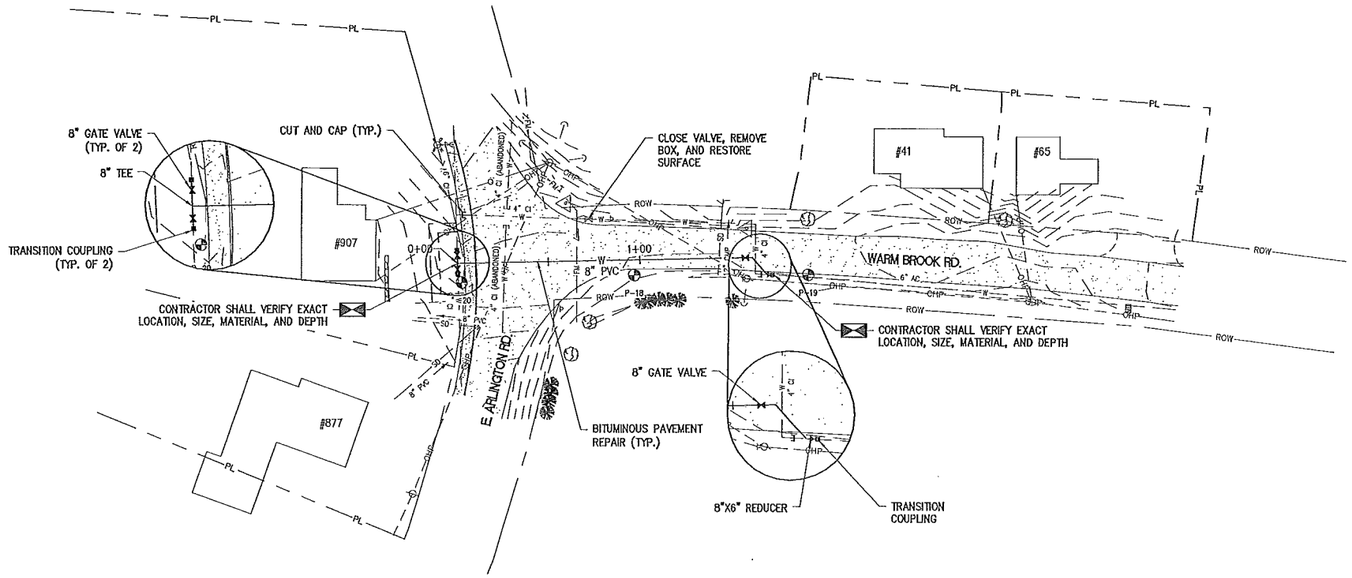
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ICE POND ROAD PLAN AND PROFILE STA. 0+00 TO 4+27

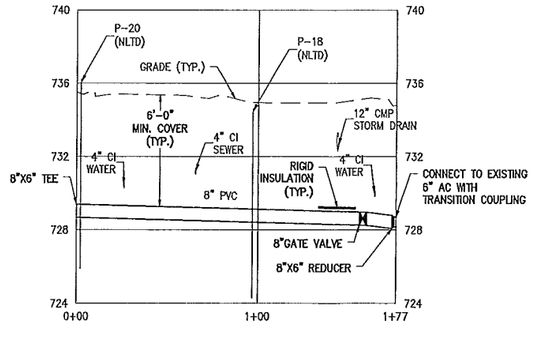
DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 13
CHECKED JJD	
DATE FEB. 2016	

Y:\15067-ARLINGTON\15067-13.dwg, 12/1/2015 2:27:42 PM



PLAN
SCALE: 1"=40'

GRAPHIC SCALE
0 40 60 80
(IN FEET)



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

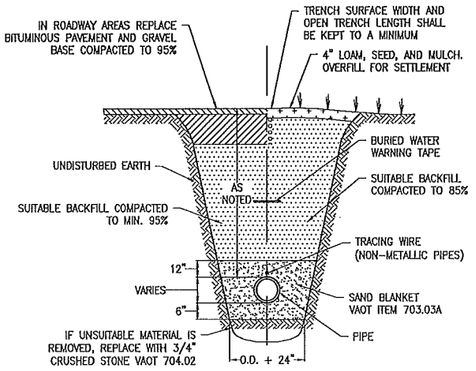
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

WARM BROOK ROAD PLAN AND PROFILE STA. 0+00 TO 1+77

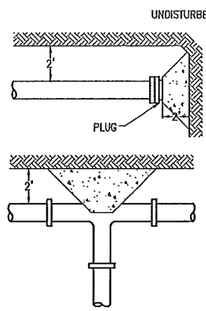
DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 14
CHECKED JJD	
DATE FEB. 2016	

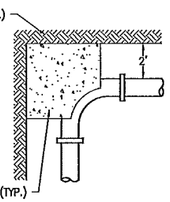


NOTES:

1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.

A 15 TYPICAL WATERLINE TRENCH DETAIL
SCALE: NONE

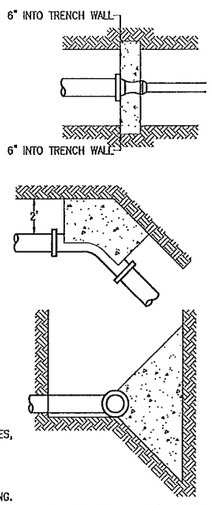




MINIMUM BEARING SURFACES SQUARE FEET					
PIPE DIA.	TEE	HYD.	90° BEND	45° BEND	END CAP
12"	14	–	18.5	10	14
10"	14	–	17	10	14
8"	8	–	14	7	8
6"	5	6	6	4	5
4"	2	–	3	2	2

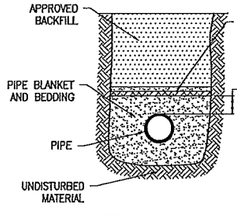
NOTES:

1. HYDROSTATIC AND LEAKAGE TEST PRESSURES PER SPECIFICATIONS.
2. THRUST BLOCKS SHALL BE PROVIDED AT ALL PRESSURIZE PIPELINE TEES, TAPPING VALVES, 90° AND 45° BENDS, REDUCERS, END CAPS, AND HYDRANTS.
3. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE. SEE SPEC SECTION 03305
4. CONCRETE SHALL BE PLACED SO AS NOT TO HAMPER THE FUTURE REMOVAL OF A FITTING.
5. ALL FITTINGS ARE TO BE WRAPPED WITH POLYETHYLENE.
6. MINIMUM BEARING SURFACE IS BASED ON A SOIL TYPE WITH AASHTO CLASSIFICATION OF GROUP A-3 AND A-4 FOR GRANULAR AND SANDY/SILTY MATERIALS. OTHER SOIL TYPES MAY REQUIRE AN INCREASE IN THE BEARING SURFACE, AS IDENTIFIED DURING CONSTRUCTION.



TYPICAL SECTION
SCALE: NONE

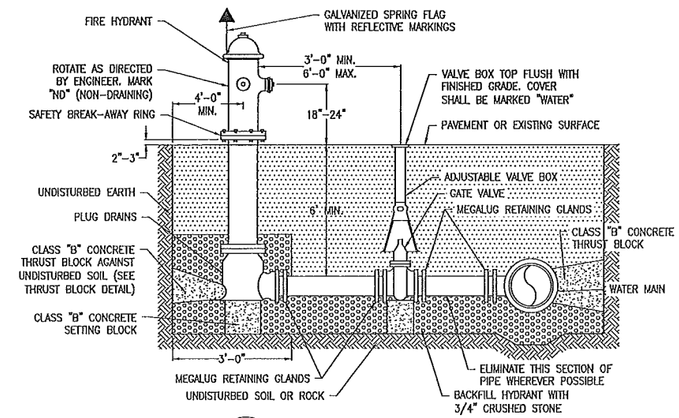
B 15 TYPICAL THRUST BLOCK DETAILS
SCALE: NONE



NOTES:

1. STAGGER INSULATION JOINTS SO THAT NO JOINTS OF THE TWO (2) LAYERS ARE ONE OVER THE OTHER.
2. TO BE INSULATED AS DIRECTED BY THE ENGINEER.
3. INSULATION TO BE UTILIZED AT ALL LOCATIONS INDICATED ON PLAN SHEETS AND OTHER AREAS WHERE 5.5' MINIMUM COVER CANNOT BE MAINTAINED.

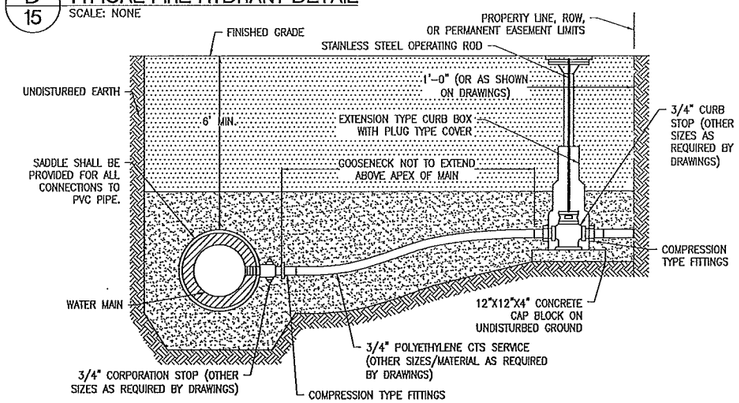
C 15 TYPICAL PIPE INSULATION DETAIL
SCALE: NONE



NOTES:

1. BRANCH PIPING AND FITTINGS SHALL BE MECHANICAL JOINT WITH RETAINING GLANDS.
2. HYDRANTS WHICH ARE INSTALLED WHERE THE GROUND WATER TABLE IS ABOVE THE HYDRANT WASTE ORIFICES SHALL HAVE THE ORIFICES PLUGGED. HYDRANTS WITH PLUGGED ORIFICES SHALL BE LABELED "ND" FOR NON-DRAINING IN 3" HIGH ORANGE PAINTED LETTERS ON THE BONNET FACING THE ROAD. HYDRANT DRAIN SHALL BE LEFT PLUGGED AS DETERMINED BY THE ENGINEER.
3. SHORT BRANCH = 4'-0".
4. GROUND AT HYDRANT SHALL BE AT STREET LEVEL. PROVIDE FILL AS NESSECARY TO RAISE HYDRANT UP TO STREET LEVEL. FILL SHALL EXTEND TO THE SHOULDER OF STREET AS NESSECARY. TO ALLOW ACCESS FROM THE STREET TO THE HYDRANT ON THE SAME LEVEL AS THE STREET. WIDTH AT THE TOP OF FILL BETWEEN HYDRANT AND STREET SHALL BE A MINIMUM OF 8 FEET. COST FOR ANY FILL REQUIRED TO RAISE GROUND TO STREET LEVEL SHALL BE INCLUDED IN COST OF HYDRANT BID ITEM.
5. USE MECHANICAL JOINT OFFSETS AS NECESSARY TO ACHIEVE SPECIFIED BURY DEPTH OF HYDRANT. COST OF ANY OFFSET SHALL BE INCLUDED IN THE UNIT PRICE FOR HYDRANT INSTALLATION.
6. ALL HYDRANT BOLTS AND NUTS BELOW GRADE SHALL BE STAINLESS STEEL.

D 15 TYPICAL FIRE HYDRANT DETAIL
SCALE: NONE



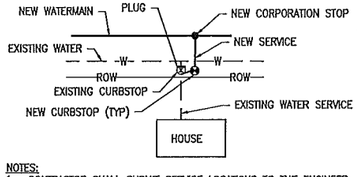
NOTES:

1. TEFLON THREAD SEALANT TAPE SHALL BE USED ON ALL CORPORATION STOPS PRIOR TO INSERTION.
   a. SPIRAL WRAP COMPLETELY COVERING THE THREAD AREA WITH TWO WRAPS.
   b. PIPE DOPE OR OTHER LIQUID THREAD SEALANTS ARE NOT ACCEPTABLE.
2. LEAVE ONE TO THREE THREADS SHOWING OUTSIDE OF PIPE. (A TORQUE OF 35 LBS. OR LESS IS RECOMMENDED).
3. CORPORATION STOPS SHALL NOT BE PLACED LESS THAN 12" APART ALONG PIPE.

E 15 TYPICAL WATER SERVICE CONNECTION DETAIL
SCALE: NONE

TYPE "A"

NEW WATER LINE DOES NOT INTERSECT EXISTING WATER SERVICE

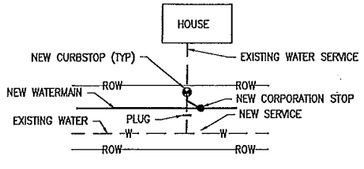


NOTES:

1. CONTRACTOR SHALL SUBMIT SERVICE LOCATIONS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL CAP END OF SERVICE, AND PROVIDE TIES TO END.
3. AFTER WATERMAIN IS ACCEPTED AND IS IN SERVICE, THE CONTRACTOR SHALL CONNECT EXISTING SERVICE TO NEW SERVICE AND PLUG UPPER END OF ABANDONED EXISTING SERVICE.

TYPE "B"

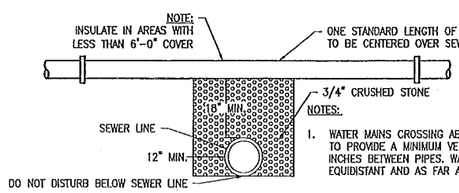
NEW WATERMAIN INTERSECTS EXISTING WATER SERVICE



NOTES:

1. CONTRACTOR SHALL CONSTRUCT NEW WATER SERVICE TO MEET EXISTING WATER SERVICE WITHIN THE R.O.W. OR EASEMENT LIMIT.
2. CONTRACTOR SHALL CAP END OF NEW SERVICE.
3. AFTER WATERMAIN IS ACCEPTED AND IS IN SERVICE, THE CONTRACTOR SHALL CONNECT EXISTING SERVICE TO NEW SERVICE AND PLUG UPPER END OF ABANDONED EXISTING SERVICE.

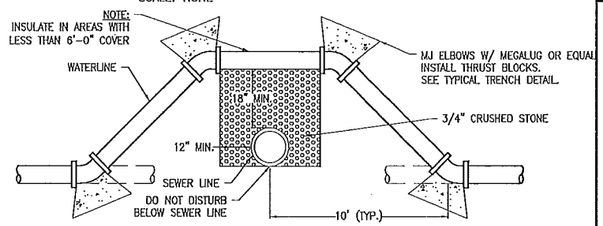
F 15 TYPICAL WATER SERVICE CONNECTIONS DETAIL
SCALE: NONE



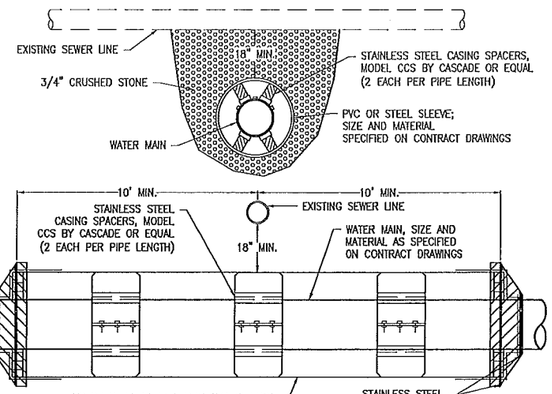
NOTES:

1. WATER MAINS CROSSING ABOVE SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN PIPES. WATER MAIN JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER

WATERMAIN ABOVE SEWER
SCALE: NONE



RELOCATION OF WATERMAIN ABOVE SEWER
SCALE: NONE



NOTES:

1. PARALLEL INSTALLATION: WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED MANHOLE, SANITARY SEWER OR FORCEMAIN. THIS DISTANCE CAN BE REDUCED TO 5 FEET FOR STORM SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. WHERE SEWERS ARE BEING INSTALLED, AND THE ABOVE SEPARATION CAN NOT BE MET, THE SEWER MATERIALS SHALL BE WATER MAIN PIPE OR EQUAL AND SHALL BE PRESSURE TESTED TO ENSURE WATERTIGHTNESS.
2. CROSSINGS: SEE THE DETAILS ABOVE.

WATERMAIN BELOW SEWER
SCALE: NONE

G 15 TYPICAL WATER/SEWER SEPARATION DETAILS
SCALE: NONE

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

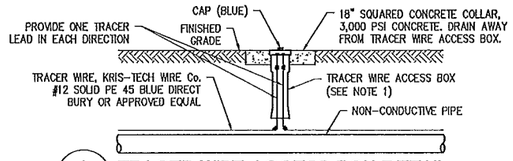
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

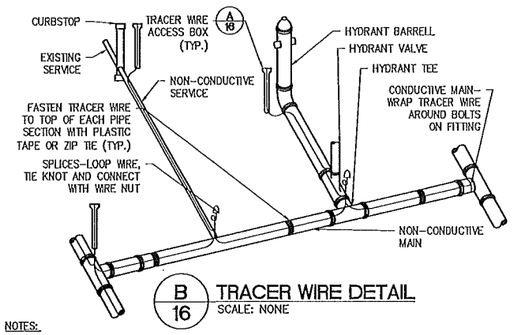
WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

WATER DETAILS

DESIGNED	PROJECT NO.
NAP	15067
DRAWN JEN	DRAWING 15
CHECKED JJD	
DATE FEB. 2016	



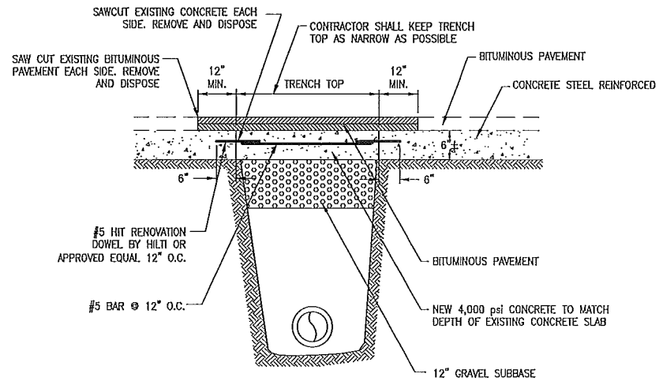
A/16 TRACER WIRE ACCESS BOX DETAIL
SCALE: NONE



B/16 TRACER WIRE DETAIL
SCALE: NONE

NOTES:

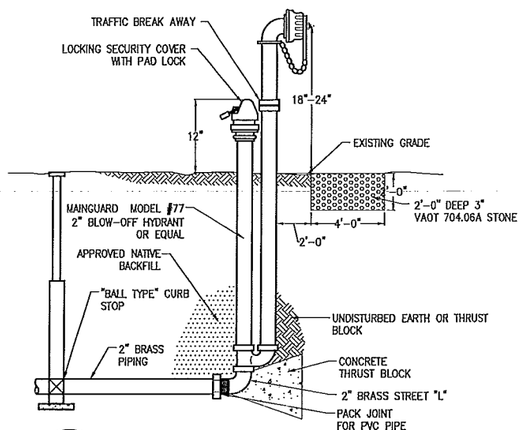
1. TRACER WIRE SHALL BE TERMINATED AT EACH END IN A FLUSH MOUNT ACCESS BOX. ACCESS BOX SHALL HAVE A CAST IRON LID THAT CAN BE LOCKED AND OPENED WITH A STANDARD PENTAGON HEAD KEY WRENCH. TRACER WIRES SHALL BE STRIPPED AND ATTACHED TO STAINLESS STEEL SCREWS MOUNTED TO THE UNDERSIDE OF THE LID. SUFFICIENT SLACK (12" MIN.) SHALL BE LEFT IN WIRE LENGTH SO COVER CAN BE LIFTED WITH WIRE INTACT. TRACER WIRE ACCESS BOX SHALL BE LOCATED OVER PIPE LINE TO WHICH TRACER LEAD IS ATTACHED AND SET TO GRADE. TRACER WIRE ACCESS BOX SHALL BE VALVCO TWAB OR APPROVED EQUAL.
2. TRACER WIRE ACCESS POINTS SHALL IN GENERAL BE NO MORE THAN 500 FEET APART.



NOTES:

1. ALL MATERIALS SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN IN DETAIL D/15.
2. ALL EXISTING ROAD LINES SHALL BE RE-MARKED AS NECESSARY.
3. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.

C/16 CONCRETE ROADWAY TRENCH REPAIR DETAIL
SCALE: NONE



D/16 TYPICAL FLUSHING HYDRANT DETAIL
SCALE: NONE

NOTES:

1. POST HYDRANTS SHALL BE NON-DRAINING TYPE WITH A 6' BURY DEPTH. THESE HYDRANTS SHALL BE FURNISHED WITH A HORIZONTAL INLET, A NON-TURNING OPERATING ROD, AND SHALL OPEN TO THE LEFT. ALL OF THE WORKING PARTS SHALL BE OF BRONZE-TO-BRONZE DESIGN, AND BE SERVICEABLE FROM ABOVE GRADE WITH NO DIGGING. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST.

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

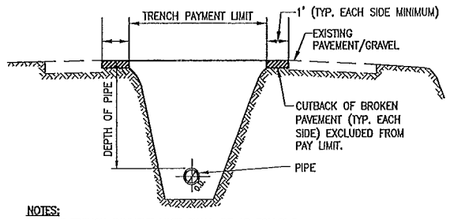
No.	DATE	DESCRIPTION

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

WATER AND ROADWAY DETAILS

DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 16
CHECKED JJD	
DATE FEB. 2016	



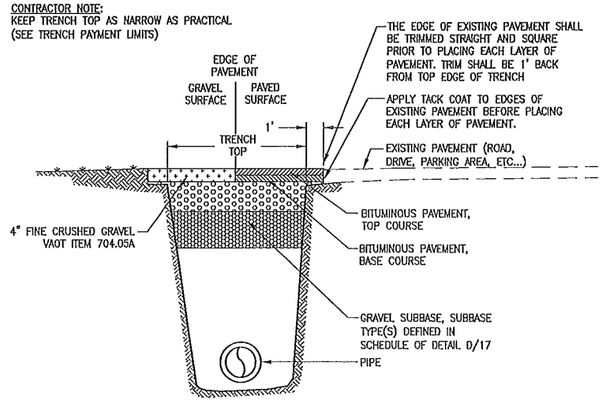
NOTES:

1. THE TRENCH PAYMENT LIMIT SHALL BE AS FOLLOWS:

DEPTH OF PIPE	TRENCH LIMIT
0 TO 10 FEET	O.D.+5'
GREATER THAN 10 FEET	O.D.+7'

2. THE TRENCH PAYMENT LIMIT SHALL BE THE TRENCH LIMIT AS SHOWN ABOVE.
3. THE TRENCH LIMIT APPLIES TO SINGLE PIPE AND DUAL PIPE TRENCHES. NO INCREASE IN TRENCH LIMIT WIDTH IS MADE FOR DUAL TRENCH INSTALLATIONS.
4. THE TRENCH PAYMENT LIMIT APPLIES TO ALL TRENCHES AND ALL SURFACES. SURFACE REPLACEMENT AND RESTORATION OUTSIDE OF THE TRENCH PAYMENT LIMITS WILL BE AT THE CONTRACTOR'S EXPENSE.
5. WHERE CONCRETE ROADWAY IS REMOVED PERPENDICULAR TO THE ROADWAY (OR FLOW OF TRAFFIC), THE EDGES OF THE SECTION, TO BE REMOVED WITHIN THE TRENCH PAYMENT LIMITS, SHALL BE SAWCUT STRAIGHT PRIOR TO REMOVAL OF THE CONCRETE.

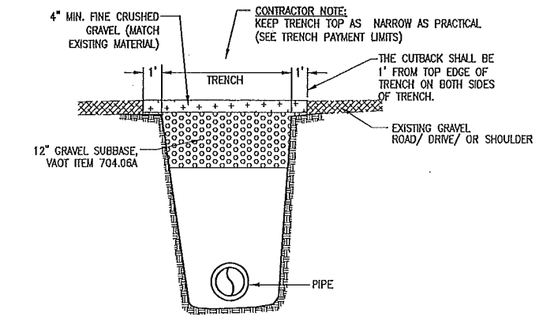
A / 17 TRENCH PAYMENT LIMITS
SCALE: NONE



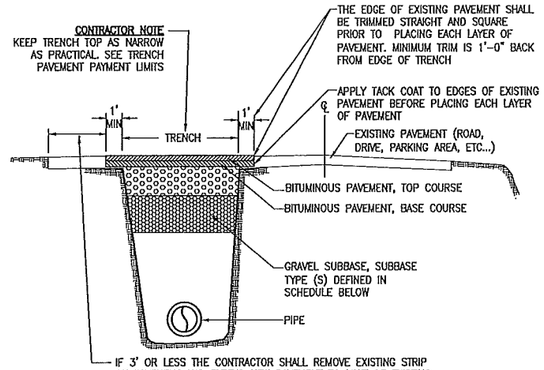
NOTES:

1. IT IS INTENDED THAT THE CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT CONTRACTOR'S EXPENSE.
2. ALL PAVEMENT AND GRAVEL SUBBASE SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN IN "SCHEDULE OF TRENCH REPAIR THICKNESSES" SEE DETAIL D/17.
3. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
4. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY.
5. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.

B / 17 EDGE OF PAVEMENT TRENCH REPAIR DETAIL
SCALE: NONE



C / 17 TYPICAL GRAVEL ROAD/DRIVE/OR SHOULDER REPAIR
SCALE: NONE



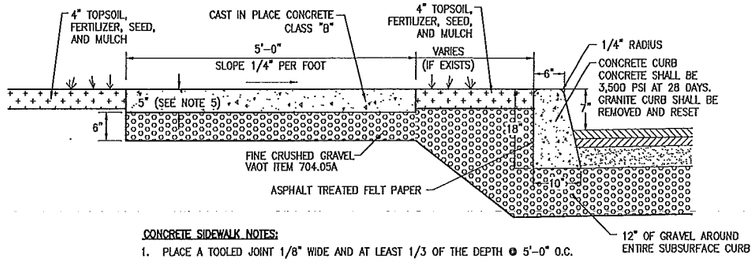
PAVEMENT REPAIR NOTES:

1. ALL PAVEMENT SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN.
2. IF NECESSARY, SHOULDER SHALL BE REPLACED TO A CONDITION EQUAL OR BETTER THAN BEFORE CONSTRUCTION ACTIVITIES.
3. ALL EXISTING PAVEMENT MARKINGS SHALL BE RE-PAINTED AS NECESSARY.
4. IT IS INTENDED THAT CONTRACTOR AVOID ANY DAMAGE TO EXISTING ROADWAY OR SHOULDER PAVEMENT. HOWEVER WHERE PIPE MUST BE INSTALLED WITHIN 3'-0" OF PAVED SURFACE, BITUMINOUS PAVEMENT REPAIR SHALL BE PAID IN ACCORDANCE WITH "TRENCH PAYMENT LIMITS" AND UNIT PRICE BID. PAVEMENT REPAIR OUTSIDE APPROVED LIMITS SHALL BE AT CONTRACTOR'S EXPENSE.

SCHEDULE OF TRENCH REPAIR THICKNESSES

	STREETS	DRIVEWAYS AND PARKING LOTS
BITUMINOUS PAVEMENT		
TOP COURSE	1-1/2" TYPE III	1" TYPE IV
BASE COURSE – TYPE II	2-1/2"	2"
FINE GRADED GRAVEL SUBBASE, VAOT ITEM 704.05A	6"	4"
GRAVEL SUBBASE, VAOT ITEM 704.06A	12"	8"

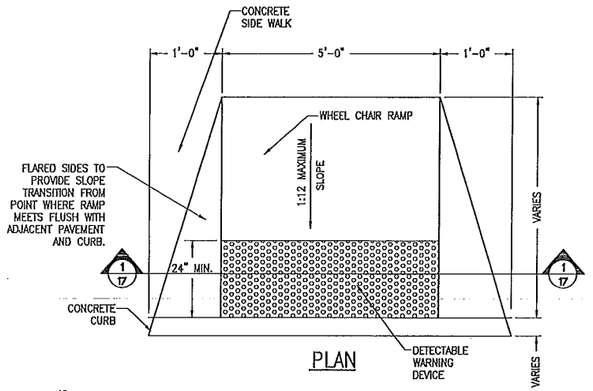
D / 17 TRENCH PAVEMENT REPAIR DETAIL
SCALE: NONE



CONCRETE SIDEWALK NOTES:

1. PLACE A TOOLED JOINT 1/8" WIDE AND AT LEAST 1/3 OF THE DEPTH @ 5'-0" O.C.
2. PLACE AN EXPANSION JOINT EVERY 20'-0" FOR SIDEWALK AND CURBS.
3. BROOM FINISH WITH SMOOTH TROWEL EDGES.
4. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH VAOT STANDARDS, SECTION 618.
5. CONCRETE SHALL BE THICKENED TO 8" THROUGH ALL RESIDENTIAL AND COMMERCIAL DRIVES.
6. WHERE ONLY SMALL SECTIONS OF CONCRETE SIDEWALK ARE BEING REPLACED, I.E , A SERVICE CROSSING OR HYDRANT INSTALLATION, THE WIDTH SHALL MATCH THE EXISTING SIDEWALK. REFER TO DRAWINGS.
7. SIDEWALK AND CURB REPLACEMENT AT SERVICE CROSSINGS AND HYDRANT INSTALLATIONS SHALL BE PAID IN ACCORDANCE WITH THE TRENCH PAYMENT LIMIT DETAIL.
8. SIDEWALK AND CURB DISTURBED DURING PIPE INSTALLATION THAT LIES WITHIN THE TRENCH PAYMENT LIMIT PER THE TRENCH PAYMENT LIMIT DETAIL SHALL BE REPLACED PER THIS DETAIL. ALL SIDEWALK AND CURB DISTURBED BY THE CONTRACTOR OUTSIDE OF THIS LIMIT WILL BE REPLACED PER THIS DETAIL AT THE CONTRACTOR'S EXPENSE.

E / 17 CONCRETE SIDEWALK AND CURB DETAIL
SCALE: NONE



HANDICAP RAMP NOTES:

1. REFER TO TYPICAL SIDEWALK DETAIL FOR ADDITIONAL CONSTRUCTION SPECIFICATIONS.
2. RAMP CONCRETE TO HAVE BROOM FINISH.

1 / 17 SECTION
SCALE: NONE

F / 17 SIDEWALK HANDICAP RAMP/CURB CUT/DETECTABLE WARNING DETAIL
SCALE: NONE

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

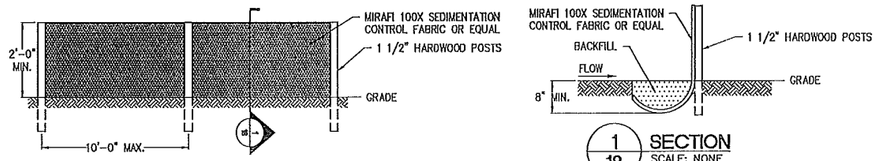
No.	DATE	DESCRIPTION	CHECKED

TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

ROADWAY DETAILS

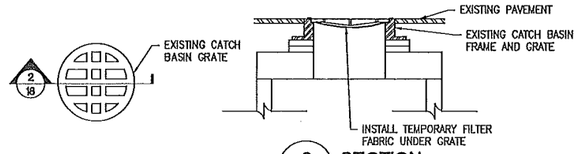
DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 17
CHECKED JJD	
DATE FEB. 2016	



1/18 SECTION
SCALE: NONE

NOTES:
1. SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR APPROVED EQUAL.
2. INSTALL WHERE SHOWN ON PLANS. THE FENCE SHALL BE INSTALLED PARALLEL TO CONTOURS WHERE POSSIBLE. THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.
3. SECTIONS OF THE SILT FENCE SHALL BE JOINED TO OVERLAP BY FOLDING FABRIC AROUND EACH POST ONE FULL TURN. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OR BUILT-UP SEDIMENT AT JOINT.
4. INSPECT ALL SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF THE SILT FENCE.
5. UPON FINAL STABILIZATION OF THE AREA UPHILL OF THE FABRIC, THE FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.

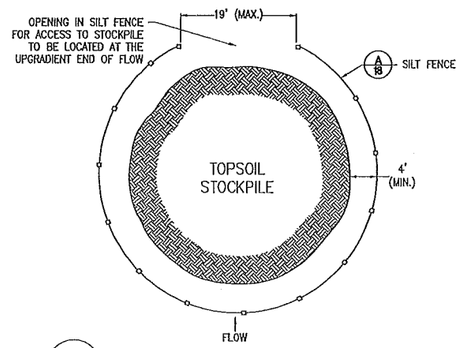
A/18 TYPICAL TEMPORARY SILT FENCE DETAIL
SCALE: NONE



2/18 SECTION
SCALE: NONE

NOTES:
1. UNDERGRATE FABRIC INLET PROTECTION SHALL ONLY BE USED WHERE SHOWN ON PLANS. IT SHOULD ONLY BE USED FOR EXISTING CATCH BASINS IN EXISTING PAVED AREAS FOR LINEAR PIPELINE PROJECTS WHERE AMOUNT OF SEDIMENT RUN OFF IS MINIMAL AND DURATION OF CONSTRUCTION IS SHORT.
2. LIFT THE GRATE AND INSTALL FILTER FABRIC (MIRAFI 140NL OR EQUAL) OVER THE FRAME, AND THEN SET GRATE BACK IN PLACE.
3. INSPECT EACH INLET AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EVERY RAINFALL. REPAIR AND REPLACEMENT OF INLET PROTECTION SHALL BE MADE AT TIME OF INSPECTION.
4. UPON STABILIZATION OF THE AREA UPSTREAM FROM THE INLET, THE PROTECTION SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.

B/18 TYPICAL TEMPORARY INLET PROTECTION DETAIL
SCALE: NONE



C/18 TYPICAL TOPSOIL STOCKPILE DETAIL
SCALE: NONE

EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO PERFORMING ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. THE MEASURES SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MEASURES DETERMINED NECESSARY IN THE FIELD.
2. SILT FENCE SHALL BE INSTALLED, AS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. THE SILT FENCE SHALL BE MAINTAINED AND CLEANED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHALL BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
3. PROPER EROSION CONTROLS SHALL BE PROVIDED AROUND STOCKPILED EXCAVATED MATERIALS. THESE CONTROLS MAY INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING METHODS OF EROSION PREVENTION AND SEDIMENT CONTROL: PERIMETER SILT FENCE; INTERCEPTOR DRAINAGE DITCHES; VELOCITY REDUCTION DAMS IN DRAINAGE DITCHES; TEMPORARY BANK PROTECTION SUCH AS RIPRAP, MATTING, OR ARTIFICIAL COVERING; STONE CHECK DAM CONTROL SYSTEMS; SPECIAL STOCKPILING METHODS; AND WATER BARS.
4. THE CONTRACTOR SHALL PROVIDE A MECHANICAL SWEEPER AND SHALL SWEEP CLEAN THE ROADS IN THE CONSTRUCTION AREAS AS REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND PREVENT SEDIMENT RUNOFF INTO RECEIVING WATERS AND AS DIRECTED BY THE ENGINEER.
5. TEMPORARY EROSION CONTROL MEASURES SHALL BE UTILIZED BY THE CONTRACTOR AS REQUIRED TO PREVENT ANY SEDIMENTATION FROM RUNNING INTO RECEIVING WATERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE ANY IMPACT OF THE ON-SITE SURFACE RUNOFF ON THE QUALITY OF THE RECEIVING WATERS.
6. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS DISTURBED DURING CONSTRUCTION, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE ENGINEER. LAND SHALL NOT BE LEFT DISTURBED DURING THE WINTER MONTHS AND OVERWINTER STABILIZATION MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15TH.
7. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOAMED, LIMED, FERTILIZED, SEEDED, AND MULCHED WITHIN 48 HOURS OF FINAL GRADING. A MINIMUM OF 3 INCHES OF LOAM SHALL BE PLACED. SEED, LIME, FERTILIZER, AND MULCH SHALL CONFORM TO SPECIFICATION SECTION 02930.
8. NO DISTURBED AREAS SHALL BE LEFT UNSEEDED AND UNMULCHED FOR MORE THAN SEVEN (7) DAYS. DISTURBED AREAS WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL. CONTRACTOR MAY ALSO USE EROSION MATTING OR OTHER APPROVED METHODS OF TEMPORARY COVER.
9. ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE ON-SITE COORDINATOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE.
10. AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER, THE DOWNSTREAM TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE ACCUMULATED SEDIMENT PROPERLY DISPOSED OF. THE AREA DISTURBED BY THE REMOVAL OF TEMPORARY MEASURES SHALL BE PREPARED, SEEDED, AND MULCHED.

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

No.	DATE	DESCRIPTION	CHECKED

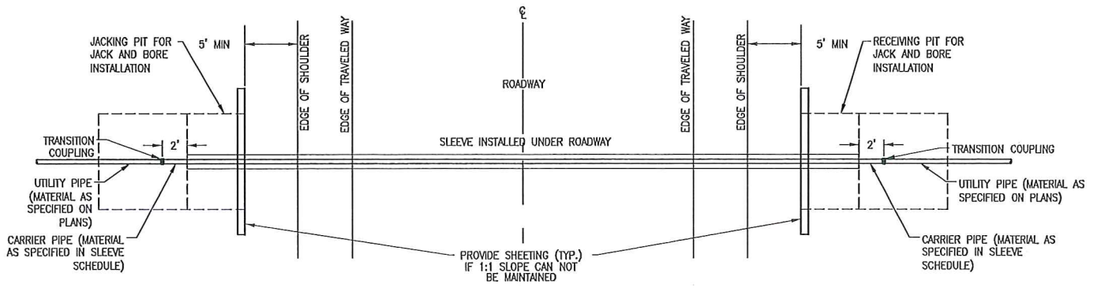
TOWN OF ARLINGTON, VERMONT

WATER SYSTEM IMPROVEMENTS CONTRACT No. 1

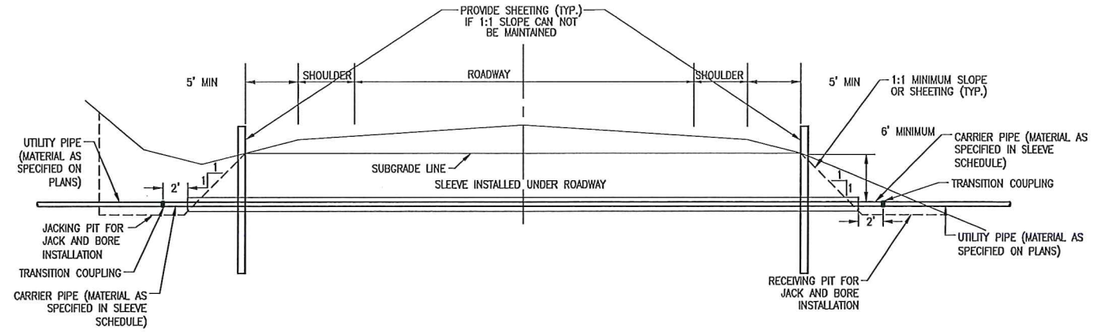
EROSION CONTROL DETAILS AND NOTES

DESIGNED NAP	PROJECT NO. 15067
DRAWN JEN	DRAWING 18
CHECKED JJD	
DATE FEB. 2016	

Y:\15067-ARLINGTON\15067-18.dwg, 12/1/2015 11:13:56 AM



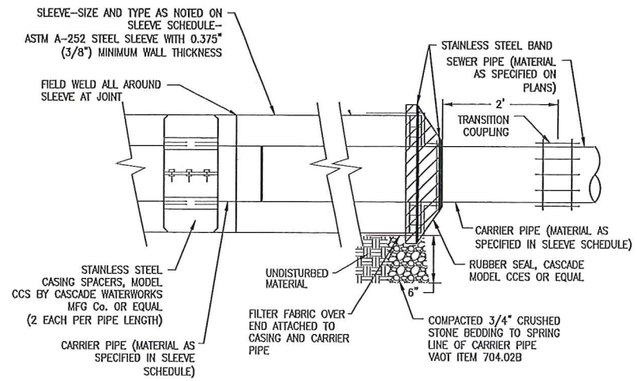
PLAN



PROFILE

A C13 MAIN SLEEVE SECTION
SCALE: NONE

NOTES:
1. CONSTRUCT IN ACCORDANCE WITH VTRANS STANDARD D-20 HIGHWAY CROSSING SLEEVES FOR UNDERGROUND UTILITIES.

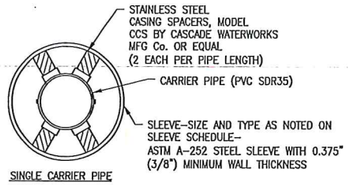


NOTES:
1. BID ITEM INCLUDES THE TRANSITION COUPLING AND THE CARRIER PIPE(S) FROM TRANSITION COUPLING TO TRANSITION COUPLING.
2. ALL STEEL SLEEVES SHALL BE ASTM A-252 WITH 0.375" (3/8") MINIMUM WALL THICKNESS.
3. CARRIER PIPE SHALL BE PUSH-ON WITH FIELD-LOK GASKETS.

SLEEVE SCHEDULE

Drawing No.	Bid Item	Location	Station	Carrier Pipe Size and Type	Sleeve Size	Installation Method
C4	A-10	Route 44	0+28 to 0+72	8" DI	24" x 44'	Jack and Bore
C5A	A-10	Route 44	5+68 TO 6+10	8" DI	24" x 42'	Jack and Bore
C7	A-10	Route 44	0+19 to 0+80	8" DI	24" x 61'	Jack and Bore
C7	A-9	Route 44	2+40	6" DI	12" x 40'	Jack and Bore
C7	A-8	Route 44	3+82	4" DI	8" x 44'	Jack and Bore
C7	A-9	Route 44	5+27	6" DI	12" x 44'	Jack and Bore
C7	A-10	Route 44	7+39 to 7+75	8" DI	24" x 36'	Jack and Bore
C9	A-9	Route 44	9+17	6" DI	12" x 28'	Jack and Bore
C9	A-9	Route 44	11+89	6" DI	12" x 28'	Jack and Bore

B C13 TYPICAL SLEEVE DETAIL
SCALE: NONE



SINGLE CARRIER PIPE

C C13 TYPICAL SLEEVE SECTION
SCALE: NONE

EXAMPLE

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

STATE OF VERMONT JOSEPH J. DUNN No. 7479 Environmental LICENSED PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION	CHECKED

TOWN OF WEST WINDSOR, VERMONT

WEST WINDSOR BROWNSVILLE SEWER COLLECTION SYSTEM CONTRACT No. 1

SLEEVE SECTIONS AND DETAILS

DESIGNED	PROJECT NO.
NAP	14020
DRAWN JEN	DRAWING C13
CHECKED JJD	
DATE JUNE, 2015	

V:\14020 - West Windsor Brownsville\14020-C13.dwg, 6/30/2015 9:54:06 AM